JVC

INSTRUCTIONS

GR-65

CAMERA-RECORDER/PLAYER

MANUEL D'INSTRUCTIONS: CAMERA-ENREGISTREUR/LECTEUR
BEDIENUNGSANLEITUNG: KAMERA-RECORDER
MANUAL DE INSTRUCCIONES: CAMARA/GRABADORA
GEBRUIKSAANWIJZING: KAMERA/RECORDER
BRUKSANVISNING: KAMERA/BANDSPELARE
MANUALE DI ISTRUZIONI: TELECAMERA/REGISTRATORE

Specifically for the GR-65E/AA-V6EG
Spécial pour le GR-65E/AA-V6EG
Für modellausführung GR-65E/AA-V6EG
Especialmente para le GR-65E/AA-V6EG
Speciaal voor de GR-65E/AA-V6EG
Speciellt avsedd för GR-65E/AA-V6EG
Specifico per il GR-65E/AA-V6EG

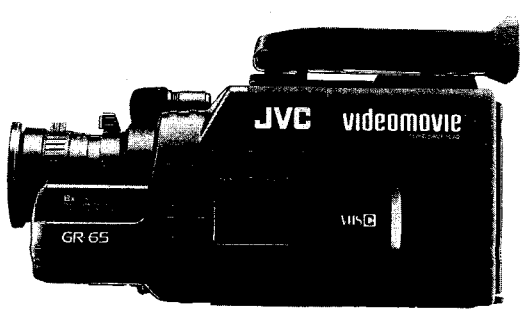
videomovie

VHS C PAL

HQ High Quality

CCD
Charge Coupled Device

AF AUTO FOCUS



YU30052-119

SAFETY PRECAUTIONS

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

This equipment should be used with DC 9.6 V ⎓ only.
CAUTION:
To prevent electric shocks and fire hazards, do NOT use any other power source.

The AA-V6EG AC Power Adapter/Battery Charger should be used with 110 – 240 V∿, 50/60 Hz only.
Caution:
To prevent electric shocks and fire hazards, do NOT use any other power source.

IMPORTANT (In the United Kingdom)
Mains Supply (240 V∿, 50 Hz only)

IMPORTANT

Do not make any connection to the Larger Terminal coded E or Green. The wires in the mains lead are coloured in accordance with following code:

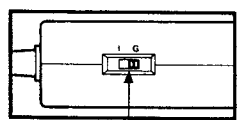
Blue to N (Neutral) or Black
Brown to L (Live) or Red

If these colours do not correspond with the terminal identifications of your plug, connect as follows:
Blue wire to terminal coded N (Neutral) or coloured black.
Brown wire to terminal coded L (Live) or coloured Red.
If in doubt – consult a competent electrician.
Note
We recommend that you should disconnect the AC cord from the outlet.

VHS C PAL HQ High Quality

- VideoMovie is designed exclusively for the VHS-C video cassette. Only cassettes marked VHS-C can be used with this unit.
- HQ VHS is compatible with existing VHS equipment.

Warning on lithium battery
The battery used in this device may present a fire or chemical burn hazard if mesused. Do not recharge, disassemble, heat above 100°C or incinerate.
Replace battery with Panasonic (Matsushita Electric) CR 2025; use of another battery may present a risk of fire or explosion.
- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.



ATTENTION:
The system select switch on the side of the optional RF-V3E RF unit has been set to G (Continental PAL, 5.5 MHz).

CAUTION:
To prevent shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified personnel.

NOTES:
- The rating plate (serial number plate) and safety caution are on the bottom of the main unit.
- The rating plate (serial number plate) of the viewfinder is on its bottom.
- The rating plate (serial number plate) of the AC power adapter/battery charger is on its bottom.

The provided viewfinder is the VF-V65E. Do not use any other viewfinder with athe GR-65E.

This unit is produced to comply with directives 76/889/EEC, 82/499/EEC and standard IEC Publ. 65.

COPYRIGHT © 1990 VICTOR COMPANY OF JAPAN, LTD.

Printed in Japan

PRECAUTIONS

For safety, strictly observe the following instructions.

- Do not open the cabinet.
- Prevent inflammables, water and metallic objects from entering the unit.
- Do not disassemble or modify the unit.
- Do not use the unit when there is lightning in the vicinity. Disconnect the power cable of connected equipment.

Avoid using the unit under the following conditions:

- Places subject to excessive humidity or dust.
- Near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).
- Places subject to soot or steam such as near a cooking stove.
- Places subject to excessive shock or vibration.
- Near a television set (rolling pictures or howling might result).
- Extremely hot places.

Do not expose the unit to high temperatures over 50°C for long periods.

If the unit should be subjected to direct sunlight, or left in a closed car in summer, or placed near a heater, the CCD and the auto-focus sensor may deteriorate and the cabinet may become deformed. Furthermore, this also may cause the transistors and other electronic and mechanical parts to malfunction. Remember the following:

- Do not leave the unit in places of over 50°C.
- Do not use the unit in places of over 40°C.
- Do not use the unit in places of below 0°C.
- Protect the unit from excessively dry or humid conditions (below 35 % or above 80 % humidity).
- For long storage, select a place between -10°C and 30°C.

Take special care for protection of the unit.

- Do not allow the unit to become wet.
- Do not leave the unit in closed cars on hot summer days.
- Take special care not to drop the unit or strike it against hard objects. Protect from shocks during transportation.

Moisture condensation

- You have observed that pouring a cold liquid into a glass will cause drops of water to from on the glass's outer surface. This same phenomenon occurs on the head drum of a VideoMovie when it is moved from a cool place to a warm place, after heating a cold room, under extremely humid conditions or in a place directly subjected to the cool air from an air conditioner.
- Moisture on the head drum can cause severe damage to the video tape, and can lead to internal damage to the VideoMovie itself.
- If moisture condensation occurs on the head drum, a condensation warning appears above the counter display and the unit enters the Stop mode, unable to function. In such a case wait for a few hours until *the indicator disappears.*

Make it a rule to observe the following instructions.

- Do not remove the battery pack or disconnect other power supply units during recording or playback before pressing the POWER switch to OFF. If not observed, this will cause tape damage.
- When the unit is not in use, remove the battery pack.

Keep the lens and viewfinder eyepiece always clean.

- When the lens if dirty or dusty, blow it off first and then gently wipe with a soft brush or lens cleaning paper.
- The lens is likely to become moldy if left dirty.

Serious malfunctioning

If malfunctioning occurs, stop using the unit immediately and consult your local JVC dealer.

Be careful not to damage the CCD and auto-focus sensor.

- Do not keep the lens directed at extremely bright objects such as the sun or other light sources for long periods. Although the CCD is less susceptible to such burn than a tube would be, caution should be exercised when using this unit. Most importantly, the lens should be capped except while actually shooting.
- If the aperture is left open, even while the camera is not being powered, the CCD may be damaged.
- Do not direct the eyepiece of the viewfinder at the sun.

Auto-focus information.

- Do not touch the focus ring while the auto-focus mechanism is in operation as this could damage the auto-focus mechanism.
- When a filter or a special-effect lens is to be attached to the end of the lens, be sure to turn power off or switch from the Auto-focus mode to the Manual mode. NEVER attempt to attach a filter or lens while the auto-focus mechanism is operating as this will result in malfunctioning. (If a teleconversion or wide-angle conversion lens is attached, the Auto-focus mode cannot be used.)

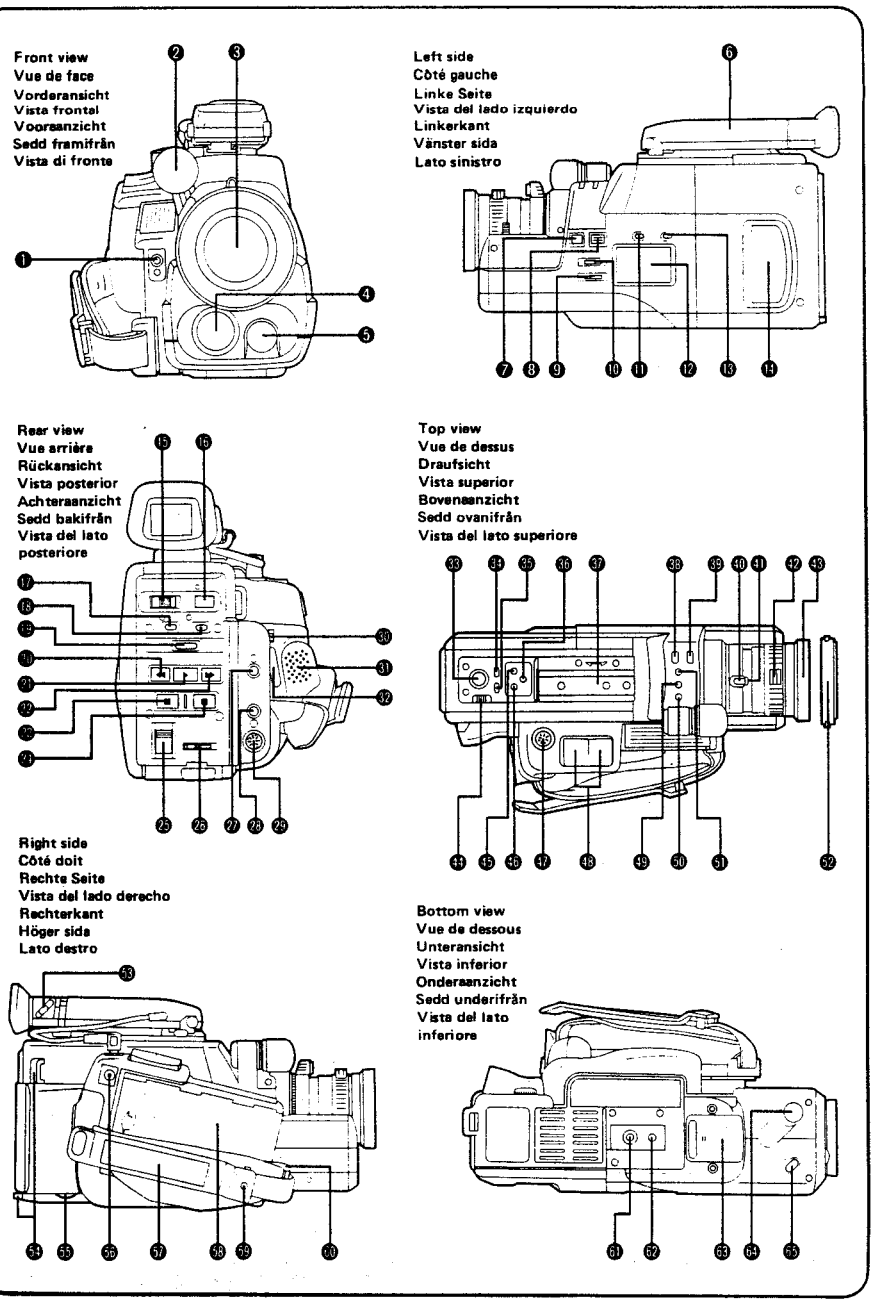
Handle the unit carefully.

- Protect the microphone from excessive shocks.
- Do not carry the unit by holding it only by the viewfinder.

Maintenance

- When the cabinet is dusty, clean by gently wiping with a soft cloth.
- Avoid the use of strong cleaning agents such as benzine or alcohol as they may damage the cabinet.
- Cleaning should be done only after the battery pack has been removed or other power units have been disconnected.

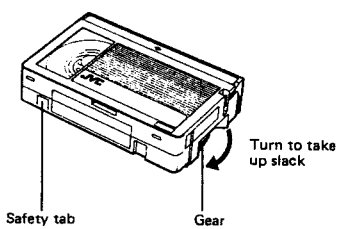
ENGLISH



ENGLISH

VIDEO CASSETTES

- The GR-65E employs only compact video cassettes carrying the VHS-C mark.
- Recording onto prerecorded tapes automatically erases the previously recorded video and audio signals.
- An inverted cassette cannot be inserted.
- Do not load and unlaod the cassette repeatedly without allowing the tape to run at all. This will slacken the tape and thereby damage it.
- Make certain befor loading the cassette that the tape is not slack. If there is any slack, turn the gear on the cassette in the direction of the arrow to take up slack.
- The cassette is equipped with a safety tab to prevent accidental erasure. When the tab is removed, recording is impossible. If you wish to record on a cassette whose tab has been removed, use adhesive tape to reseal the slot.
- To avoid excessive exposure to dust and fingerprints, do not open the front tape cover.



Storage of cassettes

- Avoid exposing the cassettes to direct sunlight. Keep them away from heaters.
- Avoid storing the cassettes in humid or dusty places.
- Do not drop the cassettes. Do not expose them to violent vibrations or shocks.
- Do not expose the cassettes to strong magnetic fields (near a motor, transformer or magnet).
- Place the cassettes in cassette cases and position them vertically.

CONTENTS

Safety precautions 1
Precautions 2
Video cassettes 3
Features 4
Controls and connectors 5
Basic preparations 8
Power supply system 9
Loading and unloading a video cassette 10
Viewfinder indications 11
Recording operations 12
  Precautions for auto-focus 13
  Manual focus 14
  Backlight compensation 14
  Rehearsal 14
  Viewfinder monitoring 14
  Multiple-speed electronic shutter 15
  Warnings 15
Power save and tape protection circuit 16
Assemble recording technique – 1 16
Assemble recording technique – 2 16
Assemble recording technique – 3 16
Recording the date/time 17
Special techniques
  Fade-in/out 18
  Zooming 18
  Macro shot 18
Digital superimpose 19
Playback 21
Connection to a television for playback 22
Tape dubbing or editing 23
Master Edit Control system 24
Insert editing 25
Audio dubbing 25
Using with another recorder 26
Charging the battery pack 27
Using the remote control unit (optional) 28
Shoe adapter (optional)/
  Carrying handle (optional) 29
Remote control unit RM-P1U (optional) 29
Tripod mounting 29
Supplemental information 30
Systems flexibility 31
Using the cassette adapter (provided) 32
In case of difficulty 33
Specifications 34

FEATURES

- Allows direct playback with no additional components necessary.
- Flying erase head for precise, quality assemble/insert editing.
- Ultra-compact and ultra-lightweight a mere 1.2 kg.
- 3-Page Digital Superimpose function for mixing titles or illustrations into a live recording.
- Multiple-speed electronic shutter for sharp clear playback of fast-action shots – 1/1000, 1/500, 1/250, 1/50 (standard)-second.
- Insert editing function.
- Audio dubbing facility.
- Newly developed high-resolution 1/2" field-storage type CCD (Charge Coupled Device) pickup.
- One-button full-auto operation of focus, exposure, and white balance.
- Powerful, two-speed 8:1 power zoom.
- HQ (High Quality) System for superlative picture quality.
- High-sensitivity/low-lag design: allows shooting in light as low as 10 lux.
- Image Sensing auto-focus.
- Automatic Colour Tracking white balance with three preset positions.
- Backlight compensation button.
- Audio/video fader linked to start/stop trigger.
- Animation function using the Remote Control Unit RM-V15U (optional).
- Large, easy-to-read LCD (Liquid Crystal Display).
- Ultra-compact adjustable electronic viewfinder (monochrome CRT, 0.6-inch screen) with diopter control, also for instant on-the-spot playback.
- Selectable automatic date recording function.
- Recordable date/time display.
- Elapsed recording time counter.
- Retake function for quick re-recording of scenes when necessary.
- Second recording start/stop button provided on top of GR-65E.
- Dubbing mode switch provided for best results when dubbing.
- Selectable quick review function.
- One-button recording standby mechanism.
- Master Edit Control system: allows control of both GR-65E and connected designated JVC VCR using GR-65E's controls, and preroll editing for edits free of transition-point gaps and noise.
- Shuttle Search in both directions.
- Unique grip battery doubles as palm grip, saving weight and space.
- Ergonomic design with palm grip and thumb rest for trigger control.
- Trigger alarm system for preventing recording errors.
- Three-way power supply flexibility: battery pack, AC power adapter, and car battery.

The GR-65E is designed to be used with PAL-type colour television signals. It cannot be used for playback with a television of a different standard. However, live recording and viewfinder playback are possible anywhere. Use the BN-V5GU/BN-V6GU/BN-V7GU battery packs and, to recharge them, the provided multivoltage AC power adapter/battery charger. (An appropriate conversion adapter may be necessary to accommodate different designs of AC outlets in different countries.)

ENGLISH

CONTROLS AND CONNECTORS

Refer to the diagrams on the front foldout page.

ENGLISH

❶ External microphone jack (MIC)

❷ *Exclusive microphone*

Omnidirectional condenser microphone for simultaneous sound recording.

❸ 8:1 zoom lens

F/1.4, f = 8.5 – 68 mm. Filter diameter: 52 mm.

❹ Auto-focus sensor window

Allows light to enter for measuring the camera-to subject distance.

❺ White balance sensor window

Allows light to enter for white balance adjustment.

❻ Electronic viewfinder

For monitoring scenes being shot or the playback picture after recording. Several indicators are included, as well as the date/time or elapsed recording time if selected.

❼ FULL AUTO button

Pressing this button puts the focus and white balance under automatic control and selects the standard shutter speed. Auto-focus can be cancelled by pressing the FOCUS button; auto white balance can be cancelled by pressing the W.BALANCE button; the high-speed shutter can be selected by pressing the SHUTTER button. Pressing the FULL AUTO button in the full-auto mode has no effect.

❽ FOCUS select button

Switch to AUTO for automatic focus, and switch to MANUAL to focus manually. Check on the LCD. The focus mode is reversed each time this button is pressed. The auto-focus mode can also be selected (together with the auto-white mode) by pressing the FULL AUTO button.

❾ SHUTTER select button

Pressing this button switches the shutter between 1/1000 ("1000"), 1/500 ("500"), 1/250 ("250")-second high-speed shutter and 1/50-second ("STD") speeds, as displayed on the LCD. The standard shutter speed can also be selected by pressing the FULL AUTO button.

❿ W. BALANCE select button

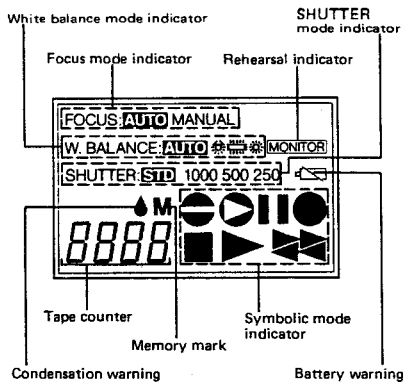
The white balance is manually selectable using this button. Press once to display the current white balance mode in the LCD. Continue pressing to cycle through the available modes.

: Halogen or tungsten lighting.
: Fluorescent lighting.
: Daylight.
AUTO: Automatic white balance adjustment.

⓫ Counter MEMORY button

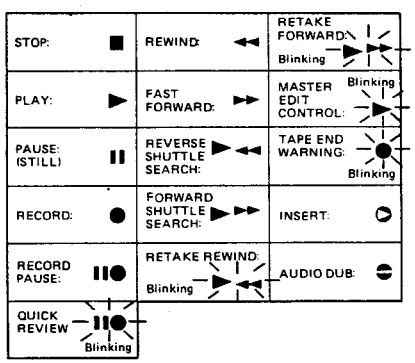
Press this button after resetting the counter to "0" at a point on the tape you want to locate later, and the tape will stop automatically at the counter reading of around "0" during rewind or fast forward.

⓬ LCD (liquid crystal display)



Tape counter: Shows from "0" to "9999".
Battery warning: Blinks when the battery power becomes insufficient for normal operation.
Condensation warning: Appears when excessive condensation occurs inside the unit.
Memory mark: Appears when the MEMORY button is pressed.

Symbolic mode indicator



⓭ Counter RESET button

Press to reset the counter to "0".

⓮ Cassette holder

Insert a VHS-C video cassette for recording or playback.

⓯ POWER switch

Slide to turn the power on. The Stop indication appears on the LCD. Slide again to switch off power.

⓰ REC standby button

Press to engage the Recording standby mode. To start recording, press either of the recording start/stop buttons ⓱, ㉚.

⓱ INSERT/MONITOR button

Push this button when you wish to rehearse shots before actually recording them. This function allows you to view the scene on the viewfinder without recording it. Push the STOP button to release it. To enter the Insert Edit mode, press this button while in the Recording Standby mode.

⓲ AUDIO DUB button

Press this button together with the PLAY button for audio dubbing.

⓳ QUICK REVIEW/EDIT button

If you want to review the end of the recorded segment for confirmation, press this button from the Record-Pause mode; the tape will be rewound for about two seconds of programme time and played back automatically for this section, after which it will stop in the Record-Pause mode in standby for the next shot. When dubbing from the GR-65E to a designated JVC VCR, it also functions to begin VideoMovie playback in synchronization with video deck recording (see "Master Edit Control system", page 24).

⓴ REW/SHUTTLE SEARCH button

Pressing this button in the Stop mode rewinds the tape; pressing it in the Play mode allows fast playback in reverse.

㉑ PLAY button

Press to start playback. When this button is pressed when the unit is in the REC PAUSE mode, the unit will enter the REC mode.

㉒ FF/SHUTTLE SEARCH button

Pressing this button in the Stop mode fast-forwards the tape; pressing it in the Play mode allows fast playback.

㉓ PAUSE/STILL button

Press to view a still picture during playback or pause playback. When this button is pressed in the REC mode, the unit will enter the REC PAUSE mode.

㉔ STOP button

Press to engage the Stop mode.

㉕ EJECT switch

To open the cassette holder.

㉖ DUBBING ON/OFF switch

Normally, set to OFF. For best picture quality when dubbing, set it to the ON position.

㉗ REMOTE control jack

For connection of the optional RM-P1U or RM-V15U remote control unit.

㉘ Earphone jack (PHONE)

㉙ AV OUT connector

Both audio and video signals can be delivered from this connector. For playback with a TV set not equipped with A/V terminals, connect the RF-V3E RF unit (optional) to this connector and to the TV. To dub from this unit, connect the A/V input connectors of a second recorder to this connector, using the A/V output cable. To play back from this unit to a TV set, make a connection between this connector andthe TV's A/V input terminals using the A/V output cable.

㉚ ALARM ON/OFF switch

Switch to ON to engage the trigger alarm system. Switch to OFF when you do not wish to use this system.

㉛ Thumb rest

Place your thumb on this grooved area next to the start/stop switch between switch operations.

㉜ Recording start/stop button (Trigger button)

Press this button in the Recording Standby mode to start recording. Pressing it again re-engages the Recording Standby mode.

㉝ Second recording start/stop (SUB TRIGGER) button

Functions exactly as the other recording start/stop button, for use when recording with the GR-65E held low.

㉞ DATE/TIME ON/OFF button

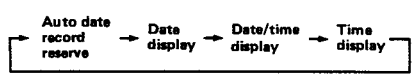
Press this button when you do not wish to record the date/time. This will remove date/time indications from the viewfinder. Press again to record date/time. Date/time will reappear in the viewfinder.

㉟ REC TIME RESET button

Press this button to reset the elapsed recording time to zero. Ejecting the cassette also does this.

㊱ DATE/TIME MODE button

Press this button to select the date/time display and Recording mode. It cycles through the modes in the following order:



The auto-date-record function automatically displays and records the date for 5 seconds upon turning on the power and beginning recording. Before recording begins, this mode is indicated in the viewfinder by auto date record reserve indication "-.-.-".

㉞ Viewfinder mount

㉟ TITLE PAGE button
Press this button to select which page of memory you wish to store your title in. This button only functions when the title is displayed in the viewfinder.

㊱ TITLE ON/OFF button
Press to mix memorised title or illustration with action being recorded. Press again to end mixing process.

㊲ Manual zoom lever
Use to turn the zoom ring manually.

㊳ Macro button
Turn the zoom ring while pressing this button for macro shooting.

㊴ Manual focus ring
Use to turn the focus ring manually.

㊵ Lens hood

㊶ REC TIME ON/OFF switch
When this switch is set to ON, the viewfinder displays the elapsed recording time. Switch to OFF to cancel the display.

㊷ DATE/TIME SELECT button
Use to select the portion of the clock or date settings to be changed. Cycles through the year, month, day, hour, and minute settings. To end adjustment, press once after selecting the minute portion.

㊸ DATE/TIME SET button
Use to set the built-in clock and date function.

㊹ Viewfinder cable connector (EVF)
Connect the viewfinder cable.

㊺ Power zoom buttons
For automatic zooming at slow speed, press lightly. For regular speed zooming, press firmly. "T" is for telephoto zooming and "W" is for wide-angle zooming.

㊻ IMAGE REVERSE button
Press this button to activate the title reverse effect. The function will switch from positive to negative mode with successive pressing of this button.

㊼ TITLE MEMORY button
Up to three "pages" of titles can be stored. The digital memory is maintained by the lithium battery which powers the unit's clock. Each time the TITLE MEMORY button is pressed, a previously stored title will be erased, and a new one will be stored in its place in the designated page of memory.

㊽ COLOR button
Press this button to select the colour for a title or illustration. The colour choices cycle as follows: black, white, yellow, cyan blue, green, magenta, red, blue. Press this button repeatedly until the desired colour appears.

㊾ Lens cap
Cap the lens when not in use.

㊿ Dioptric adjustment control
Adjusts the viewfinder lens to suit the operator's eyesight.

(51) Slots for shoulder strap

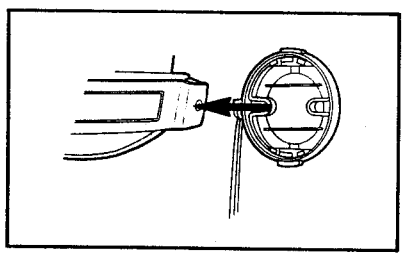
(52) TRACKING control
Minimises noise bars, if observed, during playback.

(53) DC IN terminal
For connection of the provided AA-V6EG AC power adapter/battery charger, optional BH-V5E car battery charger or AP-P1E car battery cord for DC power supply.

(54) Grip strap
Secures the operator's hand to the hand grip. Adjusts to fit hand size.

(55) Battery mount
The battery pack serves as a contoured handgrip when attached to the battery mount.

(56) Lens cap hook
This keeps the lens cap from swinging during shooting.



(57) Battery pack release lever

(58) Tripod mounting socket

(59) Stud hole

(60) CLOCK battery compartment
Holds the lithium battery that powers the date, time and title memory function.

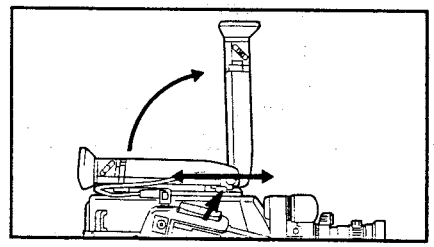
(61) BLC button
Iris control is always automatic. For backlight compensation, press this button. While it is being pressed, the iris is 1 – 2 f-stops wider than the automatic setting.

(62) FADER button
To fade out the picture to a black blank screen, press this button, then press the recording start/stop button to start fading out. To fade in from a black blank screen, press this button, then press the recording start/stop button to start fading in.

BASIC PREPARATIONS

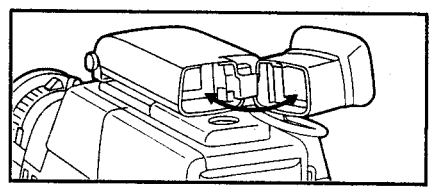
Switch off power before mounting or removing viewfinder.

Positioning the viewfinder



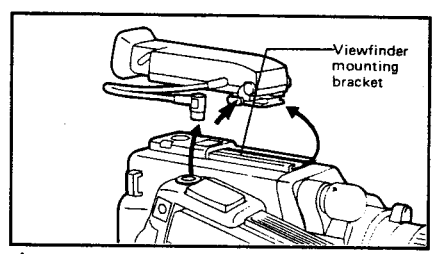
The viewfinder can be positioned for best viewability. It can slide forward or back while pressing the knob and can be tilted up 90°.

Opening the eyepiece



The veiwfinder eyepiece can be opened for cleaning or better viewability in playback.

Removing the viewfinder

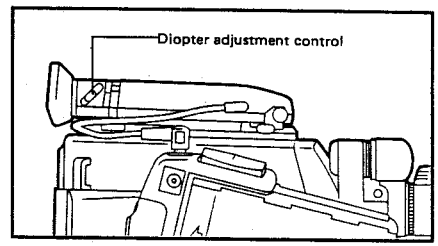


1 Pull out the viewfinder cable.

2 Slide the viewfinder out of the bracket while pressing the knob.

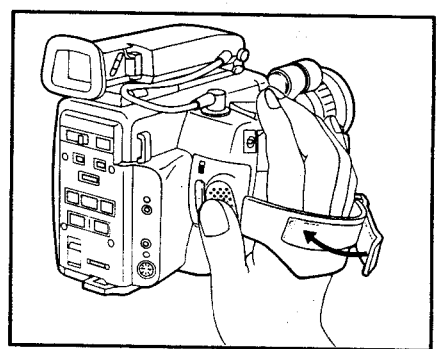
To mount the viewfinder:
Align the viewfinder's coupling fixture with the mounting bracket on the body and slide the fixture into the bracket while pressing the knob.
Connect the viewfinder cable to the viewfinder cable connector (EVF).

Diopter adjustment



The viewfinder lens can be adjusted to suit the operator's eyesight by sliding the diopter adjustment control.

Adjusting the grip strap



1 Separate the Velcro strip to expand the loop.

2 Pass your right hand through the loop and grasp the lens grip. Adjust the length of the strap to suit your hand size and refasten the Velcro strip.

POWER SUPPLY SYSTEM

ENGLISH

The convenient 3-way power supply system gives you a choice of the most appropriate power supply unit, depending on the application.

CAUTION
- No function is available without power supply.
- Do not use any power supply other than specified.
- Never attempt to use these power supply units with any equipment other than the VideoMovie.

When AC power is not available

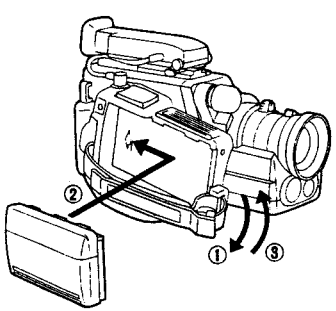
Use the battery packs:
- BN-V5GU (Regular)
- BN-V6GU (High-capacity)
- BN-V7GU (Super High-capacity)

Note:
The battery pack has been kept in the uncharged state for shipment. Therefore, before use, be sure to charge it. See page 27.

Attaching the Battery Pack

① Pull down the battery pack release lever.
② Align the battery pack over the outline in the battery pack mount, and slide the battery pack into place in the direction of the arrow.
③ Push up on the battery pack release lever, until it locks into place.

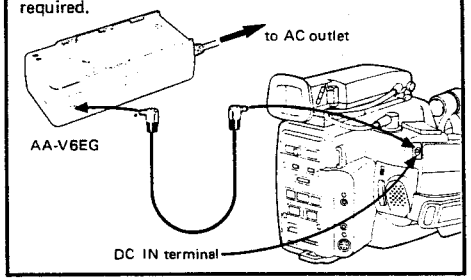
To remove the battery pack, pull down the battery pack release lever and slide out the battery.



With AC power

Use the provided AA-V6EG AC power adapter/battery charger.

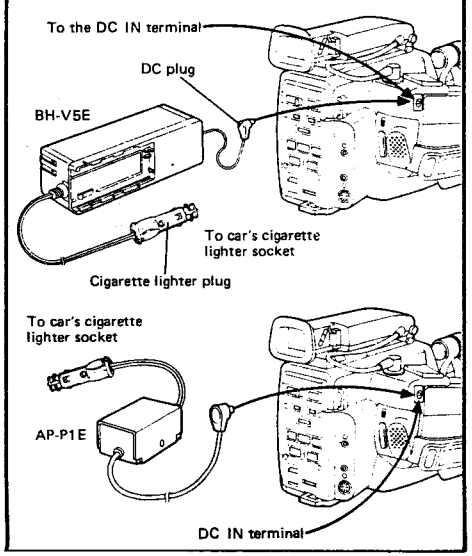
Note:
This unit can be used with 110 V to 240 V power supplies. Selection is automatic and no adjustment is required.



In a car

Use the optional AP-P1E car battery cord or BH-V5E car battery charger.

- Leave the car's engine idling when using the car battery. (For use with 12 V negative-grounded cars only.)

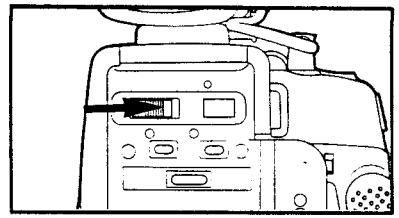


LOADING AND UNLOADING A VIDEO CASSETTE

ENGLISH

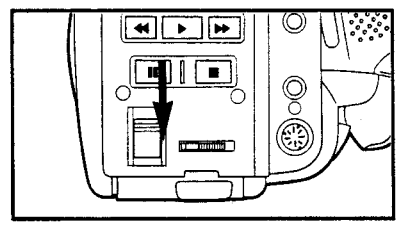
LOADING

1



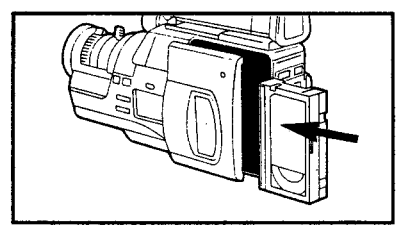
Slide the POWER switch to turn power on.

2



Open the cassette holder by pressing the EJECT button.

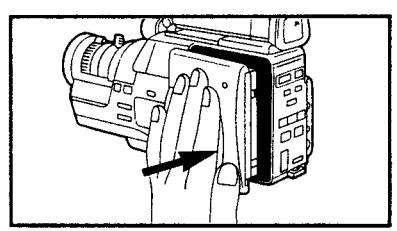
3



Insert the cassette with its label facing outward.

Ensure that tape is not slack inside the cassette, then load the cassette correctly. See page 3.

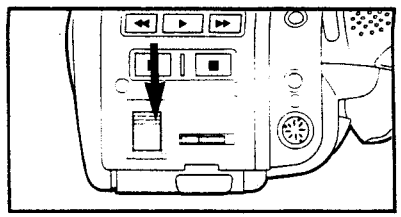
4



Close the cassette holder by pushing its centre area.

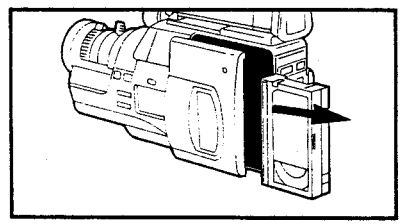
UNLOADING

1



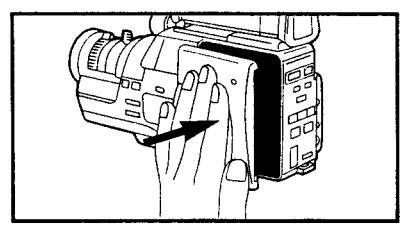
Make sure the unit is in the Stop mode. Press the EJECT button. The cassette holder will open.

2



Remove the cassette.

3

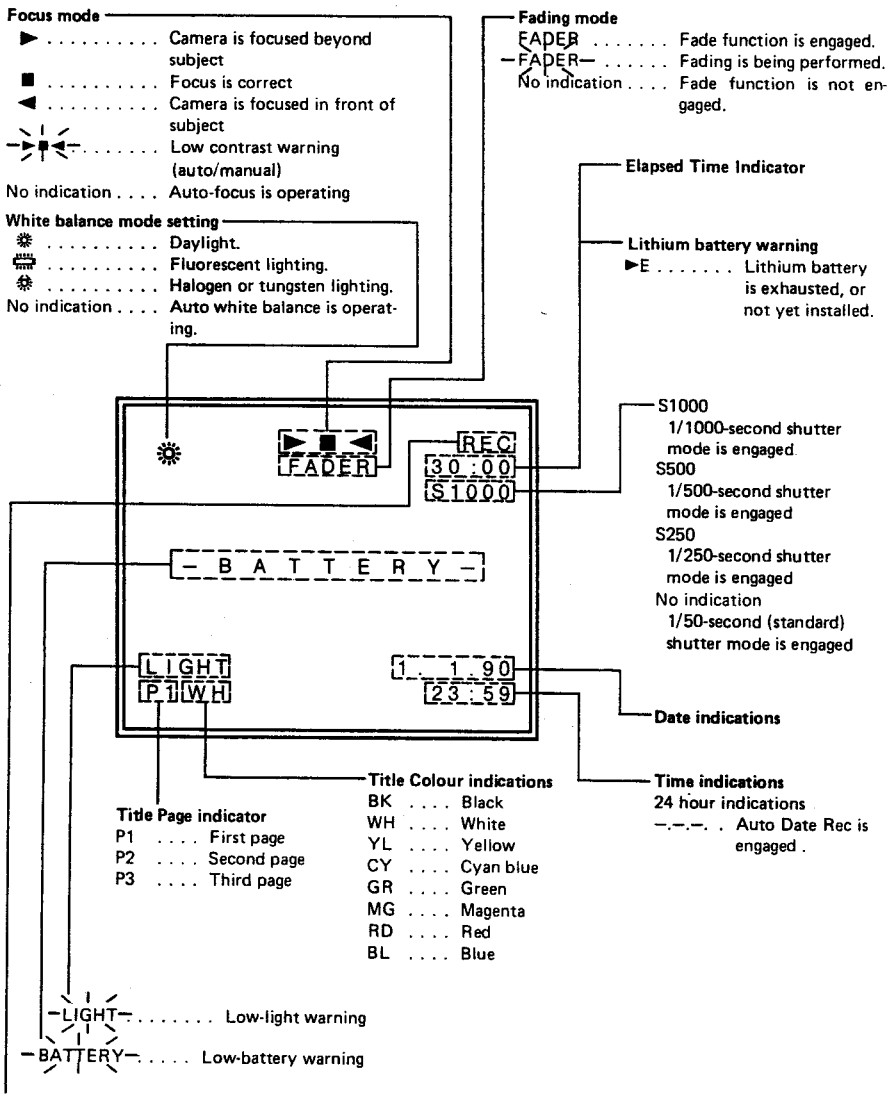


Close the cassette holder by pushing its centre area.
- When not in use, switch off power.

Note:
- Do not repeat loading and unloading of the cassette without running the tape, as this will slacken the tape, causing tape damage.

VIEWFINDER INDICATIONS

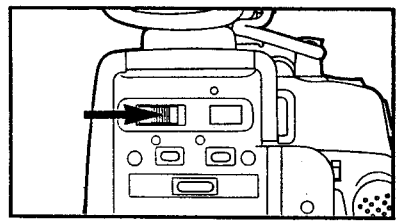
ENGLISH


Focus mode
► . . . . . Camera is focused beyond subject
■ . . . . . Focus is correct
◄ . . . . . Camera is focused in front of subject
Low contrast warning (auto/manual)
No indication . . . . Auto-focus is operating
White balance mode setting
Daylight.
Fluorescent lighting.
Halogen or tungsten lighting.
No indication . . . . Auto white balance is operating.
Fading mode
FADER . . . . . Fade function is engaged.
–FADER– . . . . . Fading is being performed.
No indication . . . . Fade function is not engaged.
Elapsed Time Indicator
Lithium battery warning
►E . . . . . Lithium battery is exhausted, or not yet installed.
S1000
1/1000-second shutter mode is engaged
S500
1/500-second shutter mode is engaged
S250
1/250-second shutter mode is engaged
No indication
1/50-second (standard) shutter mode is engaged
FADER
REC
30:00
S1000
– B A T T E R Y –
LIGHT
P1 WH
1. 1.90
23:59
Date indications
Time indications
24 hour indications
–.–.–. . Auto Date Rec is engaged .
Title Colour indications
BK . . . . Black
WH . . . . White
YL . . . . Yellow
CY . . . . Cyan blue
GR . . . . Green
MG . . . . Magenta
RD . . . . Red
BL . . . . Blue
Title Page indicator
P1 . . . . First page
P2 . . . . Second page
P3 . . . . Third page
–LIGHT– . . . . . Low-light warning
–BATTERY– . . . . Low-battery warning
Operation mode
REC . . . . . Recording is being performed
Recording Standby mode is engaged
–REC– . . . . . Tape-end warning (blinking will begin a few minutes before tape ends)
No indication . . . . . Stop, Play or Rehearsal mode is engaged

RECORDING OPERATIONS

ENGLISH

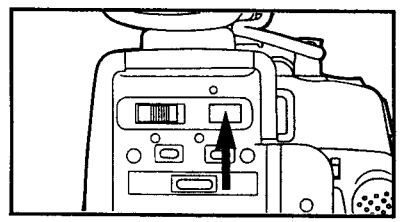
1



Slide the POWER switch to ON.

2 Insert a video cassette correctly (with its safety tab in place).

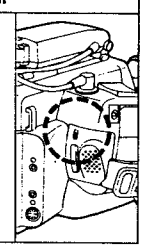
3



Press the REC Standby button. The unit enters the Recording Standby mode.

Trigger alarm system

When the ALARM ON/OFF switch is set to ON, an electronic alarm beeps when the Recording start/stop button is pressed to begin recording.
The electronic alarm beeps twice when the Recording start/stop button is pressed for record pause. This alarm helps prevent recording errors.



Elapsed time display

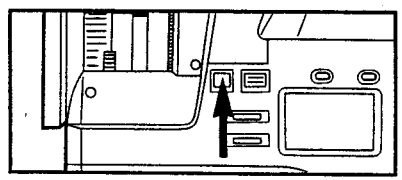
The accumulated recording time (elapsed time) can be displayed on the viewfinder.

1. Set the REC TIME ON/OFF switch to ON. The recording time is displayed on the viewfinder screen.
2. If you wish to reset it to "00:00", press the REC TIME RESET button.

Notes:

- When you wish to disengage the Elapsed Time Display mode, set the REC TIME ON/OFF switch to OFF.
- Unloading the cassette also resets the display to "00:00".

4



For full-auto operation, press the FULL AUTO button.

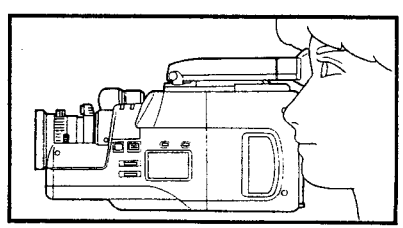
For manual override, use the W. BALANCE and FOCUS buttons.

- Press the W. BALANCE button so that the required symbol appears on the viewfinder and on the LCD.
  : when the subject is illuminated by a halogen or tungsten lamp.
  : when the subject is illuminated by a fluorescent lamp.
  : when you shoot in the daytime outdoors.
- When shooting under fluorescent light, always use the fluorescent light setting in the manual white balance mode for best results.
- For manual focus, press the FOCUS button so that MANUAL is shown on the LCD. A focus-aid indicator will appear in the viewfinder. (See page 14.)
- Iris control is always automatic. Therefore, possible combinations of auto and manual functions are as follows:

Control / Function	FULL AUTO	W. BALANCE	FOCUS	FOCUS W. BALANCE
White balance	Auto	Manual	Auto	Manual
Focus	Auto	Auto	Manual	Manual
Iris	Auto	Auto	Auto	Auto

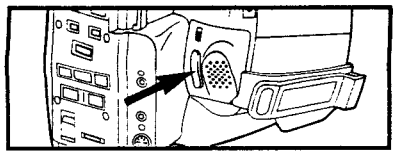
- Be careful not to cover the white balance sensor window, otherwise correct white balance will not be obtained in the auto focus mode.
- For high-speed electronic shutter, see page 15.

5



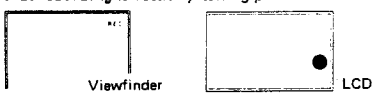
Determine the focus and composition by referring to the viewfinder image. For zooming, see page 18.
For date/time recording, see page 17.

6



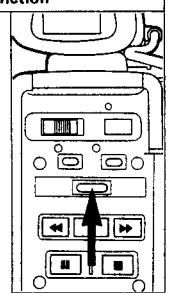
Press the start/stop button.

- This causes the recording indicator to appear on the viewfinder screen and the LCD, showing that recording is actually taking place.



7 To stop recording temporarily, press the start/stop button once again.

Quick Review function



- If you want to review the end of the last recording for confirmation, press the QUICK REVIEW/EDIT button from the Recording Standby mode; the tape will be rewound for about 2 seconds of programme time and played back automatically for this section, after which it will stop in the Recording Standby mode for the next shot.

Notes:

- The TRACKING control should be at its centre position.
- Distortion might occur when playback starts. This is normal.

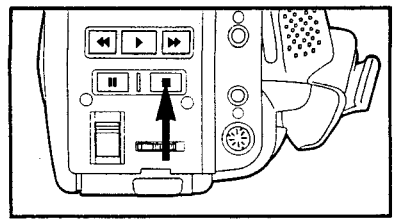
8 To restart recording, press the start/stop button.

- For a pause longer than 3 minutes, press the POWER switch to OFF.
- If the Recording Standby mode continues for longer than about 5 minutes, the unit switches itself off automatically. To restart recording, turn the power on. This makes clean assembled recordings possible even after a long pause.

Assemble recordings

- Repeating steps 6 and 7 produces assemble recordings.
- If recording is restarted from the Stop mode, a few frames of the previously recorded picture are replaced with a new recording. To avoid this, follow the technique described in "Assemble Recording Technique-2" on page 16.

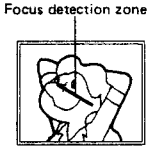
9



To end recording, press the STOP button.

- After making sure that the tape has stopped, press the POWER switch to OFF.

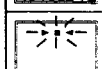
Precautions for auto-focus



- A small area around the centre of the picture, which varies depending on the zoom and focus conditions, is used to detect focus. (no actual indication provided on the screen.)
- Do not touch the focus ring while the auto-focus mechanism is in operation.
- Be careful not to cover the auto-focus sensor window, otherwise accurate focusing will not be possible.
- When not in use, do not leave the GR-65E in the Auto-focus mode with power on; otherwise light entering the auto-focus sensor window will operate the auto-focus mechanism, consuming power.
- If the lens and/or auto-focus sensor window are smeared with stains or blurred with condensation, accurate focusing is not possible. Keep them clean. If they become dirty, wipe with a piece of soft cloth. When condensation occurs, dry them by wiping with a soft cloth or wait for conditions in which they become dry.
- Correct focus may not be obtained in the following situations. In such cases manual focusing should be performed to obtain proper focus.

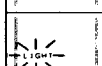
Two subjects at different distances overlap in the same scene.

Slanted lines only.



Low contrast.

Minute patterns or identical patterns that are regularly repeated.



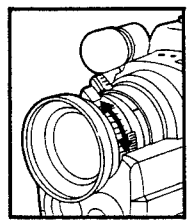
Low illumination.

Caution:

Be careful not to touch any buttons inadvertently during shooting.

Manual focus

If the manual focus mode is selected, proceed as follows:



1. Zoom in on a subject by pressing the "T" button.
2. Focus onto it by turning the focus ring. Refer to the focus aid indication chart below.
3. Determine the composition by pressing the "W" button.

Notes:

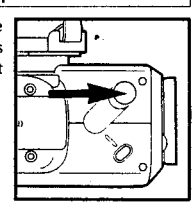
- When you use the Manual Focus mode, be sure to focus the lens in the maximum telephoto position. If you focus in on a certain subject in the wide-angle position, sharply-focused images cannot be obtained when zoomed up because the depth of field is reduced at longer focal lengths.
- Covering the white balance sensor while manually focusing will result in poor colour reproduction.

Focus indicators

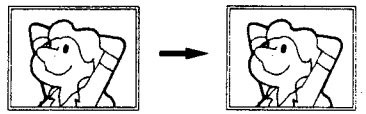
Condition	Indication	Corrective operation
Focus point behind the subject	▸	Turn the focus ring clockwise until the centre square lights.
Correct focus	▪	Keep the focus ring in the same position.
Focus point in front of the subject	◂	Turn the focus ring counterclockwise until the centre square lights.
Indication not possible because of low contrast	◂▪▸	Estimate the subject distance and set the focus ring referring to the distance scale on it.

Backlight compensation

- Press the BLC button. While it is being pressed, the iris is 1 – 2 f-stops wider than that adjusted automatically.

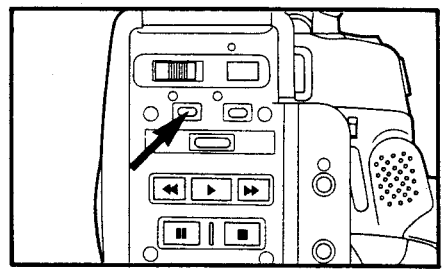


- When excessive lighting is located in back of the subject, correct exposure may not be obtainable. To compensate for this, use BLC.



Without BLC | With BLC

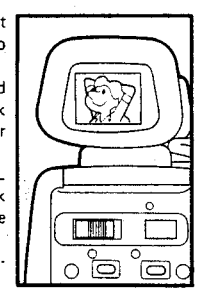
Rehearsal



If you wish to rehearse shooting angles, compose scenes, etc., without actually recording on the tape, press the INSERT/MONITOR button, instead of REC. The aimed-at scene will appear on the viewfinder screen. For full-auto rehearsal, also press the FULL AUTO button. To engage the Recording Standby mode from rehearsal, press the REC button. To disengage the Rehearsal mode, press the STOP button:

- Rehearsal is possible whether a cassette is loaded or not.
- With a cassette loaded, rehearsal is not possible during rewind or fast forward.
- The power save circuit does not function during rehearsal. (For power save function, see page 16.)

Viewfinder Monitoring



- Rewind the tape to a point from which you want to check the recording.
- Press the PLAY button, and you can view the playback picture on the viewfinder screen.
- Pressing the PAUSE/STILL button during playback stops the picture on the viewfinder screen.
- Shuttle search is also possible in both directions.

ENGLISH

Multiple-speed electronic shutter

The GR-65E is equipped with a selectable high-speed shutter that allows better recording of quick movements for sharp, clear stills or slow-motion playback. Select it when taping fast-action shots that you will want to play back later in the Still or Slow-motion mode.

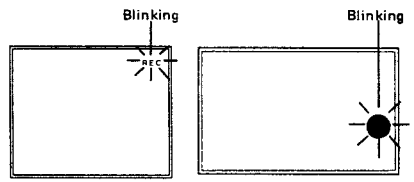
1. Select the shutter speed among 1/1000, 1/500, 1/250 and Standard (1/50)-second by pressing SHUTTER button. This can be done while recording or in any other mode. It continues at the selected speed until switched to another speed. When selected, the High-Speed Shutter mode is indicated on the viewfinder screen and LCD.
2. When finished recording the fast-action scene, switch back to the standard shutter speed by pressing the SHUTTER button until STD appears on the LCD.

Notes:

- The High-Speed Shutter mode requires slightly more subject illumination than the Standard Shutter mode. Therefore, the low-light warning may blink in the viewfinder. If so, switch to the Standard Shutter mode.
- Picture colour may be adversely affected in the High-Speed Shutter mode when the subject is lit by alternating discharge-type light sources such as fluorescent or mercury-vapour lights.
- When playing back a section recorded in the High-Speed Shutter mode, movement of subjects in the picture may not be smooth. This is not due to any defect of the unit.
- Pressing the FULL AUTO button also restores the shutter speed to the standard level.

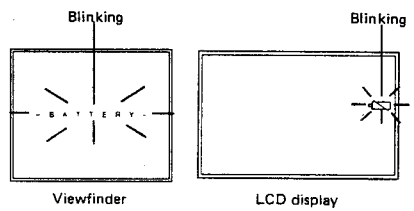
Warnings

Tape-end warning



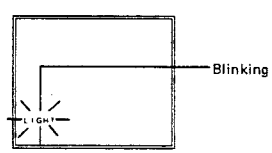
- The recording indicator blinks on the viewfinder screen and the LCD a few minutes before the end of the tape.
- When the end of the tape is reached during recording, the Stop mode engages automatically.

Battery warning



- When the battery power is coming to an end, a battery warning indication appears in both the viewfinder and the LCD. Replace the battery pack with a fully charged one.
- After these indications appear, the power turns off automatically. In this state, however, pressing the POWER switch while holding EJECT button pressed turns the power on and ejects the cassette.

Low-light warning



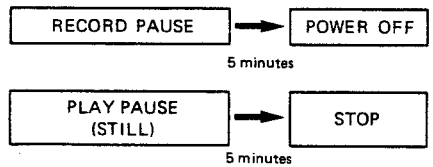
- If the blinking "LIGHT" indicator appears on the viewfinder screen, the amount of light is insufficient. Increase the lighting.

POWER SAVE AND TAPE PROTECTION CIRCUIT

- To save bettery power, the GR-65E (when battery-operated) switches itself off automatically in the following situations:
  (1) When left for longer than 5 minutes in the Stop mode.
  (2) When left for longer than 5 minutes in the Recording Standby (Record-Pause) mode.
- To protect the tape, the GR-65E (regardless of whether battery-operated or AC-powered) releases tape tension slightly and switches itself off automatically if left for longer than 5 minutes in the Recording Standby (Record-Pause) mode.
- For the same reason, the GR-65E enters the Stop mode if left for longer than 5 minutes in the Still (Play-Pause) mode.

Battery operation

Battery/AC operation



ENGLISH

ASSEMBLE RECORDING TECHNIQUE — 1 (To replace the battery pack during recording)

1 If the battery warning appears in the viewfinder or the LCD while recording, stop recording by setting the POWER switch to OFF, not the STOP button.

2 Replace the battery pack with a charged one.

3 Set the POWER switch to ON.
- The unit will be in the Recording Standby mode.

4 Press the recording start/stop button to start recording.

ASSEMBLE RECORDING TECHNIQUE — 2 (To search for the assemble point with the "Retake" function)

After reviewing a recorded segment, you may decide to re-record it immediately. The Retake function is convenient for this.

1 Make sure the camera is in the Recording Standby mode. (If not, engage the mode.)

2 Press either REW/FF button to reach the point where you wish a new recording to start. When the REW/FF button is released, the camera will enter the Recording Standby mode again.

3 Press the start/stop button to start recording.

ASSEMBLE RECORDING TECHNIQUE — 3 (To record onto a partially recorded tape)

1 Play back the tape to a point where you wish a new recording to start.
- Use the SHUTTLE SEARCH button for faster location.

2 Press the PAUSE/STILL button at the located point.
- The unit will enter the Still mode.

3 Press the REC button.
- The unit will enter the Recording Standby mode.

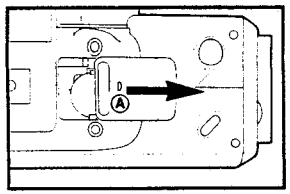
4 Press the recording start/stop button to start recording.

RECORDING THE DATE/TIME

- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

ENGLISH

Battery insertion

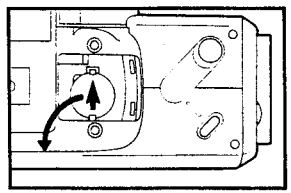


- Switch off the unit's power before inserting the battery.

This battery powers the date/time function.

1. Slide the cover off the CLOCK battery compartment on the bottom of the VideoMovie by pressing lightly on the section labelled Ⓐ in the diagram.
2. Insert the provided lithium battery **with the plus (+) side up.**
3. Slide the cover on the unit until it clicks.

Battery replacement



- Switch off the unit's power before removing old battery.

The battery lasts for about one year. When the lithium battery warning (▶E) appears in the viewfinder, this battery needs to be replaced. Obtain a new CR 2025 lithium battery and perform the following procedure.

1. Remove the battery by pressing the knob in the direction of the arrow.
2. Insert the new CR 2025 **with the plus (+) side up.**
3. Slide the cover back until it clicks.

Note:

- Replace battery with Panasonic (Matsushita type) CR 2025 only. Use of another battery may present risk of fire and explosion.

Date/time setting

Before adjusting the date and time for the first time or after replacing the batteries, 1.1.90 blinks in the viewfinder, indicating the clock needs to be set.

① Switch the unit's power on, 1.1.90 will blink in the viewfinder. Press INSERT/MONITOR button to enter rehearsal mode.
② Press the DATE/TIME SELECT button – the year blinks.
③ Press the DATE/TIME SET button to choose the correct number.
④ Press the DATE/TIME SELECT button to select the next item to change, with the item selected changing in the following sequence:

Year → Month → Day → Hour → Minute → Finish Adjustment

⑤ Repeat steps ② and ③ to set all items. After the minute setting has been performed, press the DATE/TIME SELECT button, and items will cease blinking, and the clock will resume normal function. For the auto date record mode, the auto date record reserve indicator will appear.

Date/time recording

The date, time, or date and time can be displayed and recorded according to the selected mode. Press the DATE/TIME MODE button to cycle through the modes in the following order:

→ Auto date record reserve → Date display → Date/time display → Time display →

Date/time recording indications

- When the auto-date-record function is selected, "-.-.-" appears in the viewfinder until recording begins. As long as this function is chosen, the date will be automatically displayed and recorded for about 5 seconds following the first operation of the recording start/stop button after the power is turned on.
- Auto date record reserve indication will cease to be displayed, if the DATE/TIME ON/OFF button is set to OFF unless power is reapplied.

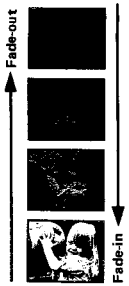
Auto date record		Date display	Date/time display	Time display
— . — . —	1 . 1 . 90	1 . 1 . 90	1 . 1 . 90 23 : 59	23 : 59
Auto date record reserve	Auto date record executed			

SPECIAL TECHNIQUES

ENGLISH

Fade-in/out

The GR-65E is equipped with an automatic fade mechanism for allowing smooth fade-in and fade-out with a black-coloured blank screen. Audio also fades in sync with video.



Automatic fade-in

1 Determine the composition in the Recording Standby mode and press the FADER button to reserve the fade-in mode.

2 Press the start/stop button. The screen will quickly become black and recording begins. When the start/stop button is released, fade-in will start. It will be completed in about 5 seconds. If the start/stop button is not released when pressed, the black picture will remain on the screen and be recorded.

Automatic fade-out

1 Start shooting as usual.

2 Press the FADER button to reserve the fade-out mode.

3 Press the start/stop button. Fade-out will start and be completed in about 5 seconds. When completed, Recording Standby mode is entered. If the start/stop button is not released when pressed, the final black picture remains on the screen and continues to be recorded, until the button is released.

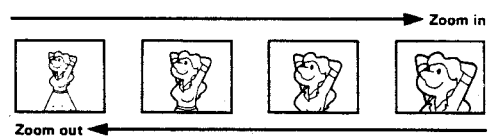
- FADER is displayed in the viewfinder when fading is reserved, and continues to be displayed until fading in or out is completed.

Zooming

When the focal length of the lens is varied by turning the zoom ring, the image appears to come nearer to or retreat from the viewer.

Power zooming

Press "T" for zooming in and "W" for zooming out. Two zooming speeds are available. For slow-speed zooming, press lightly. For regular-speed zooming, press firmly.



Manaul zooming

Rotate the zoom lever downwards for zooming in and upwards for zooming out.

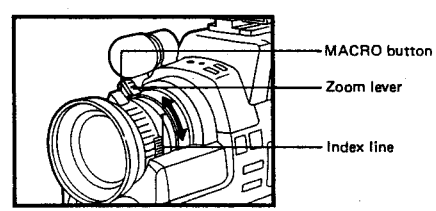
Macro shot

Normally, focusing is possible only for subjects that are more than 1.1 m away from the camera. By setting the lens to the Macro mode, it is possible to manually focus in on any subject located inside that limit, right up to the front of the lens. The MACRO and ZOOM ranges combined give continuous shooting ability from close-up to infinity.

1 First engage the Manual Focus mode. While pressing in the macro button, turn the zoom lever in the direction of the arrow until the number "8.5" on the zoom ring passes the index line.

2 Focus by turning the zoom lever slowly.

3 To release the Macro mode, turn the zoom lever back, in the opposite direction from step 1 above, until the number "8.5" passes the index line.



- Use the zoom lever to focus in the MACRO range.
- Turning the zoom ring will slightly alter the angle of view of the lens.
- For best results, it is advisable to increase illumination when shooting in macro.
- The auto-focus mechanism does not function during macro shooting.

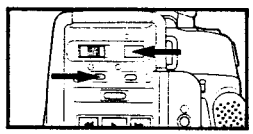
DIGITAL SUPERIMPOSE

ENGLISH

The GR-65E's Digital Superimpose function allows 3 titles to be superimposed on a recording in a choice of 8 colours and either positive or negative (reversed) styles for more creative video opportunity.

Storing Titles

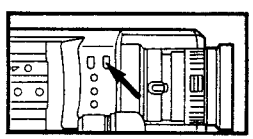
1



Put the unit into the REC PAUSE or REHEARSAL mode.

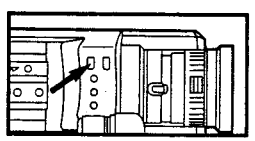
- When the "E" indication (lithium battery warning) appears in the viewfinder, titles cannot be stored. Insert the lithium battery, or replace the inserted one with a new one according to the instructions on page 17.

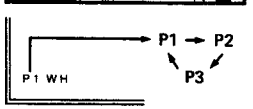
2



Press the TITLE ON/OFF button.

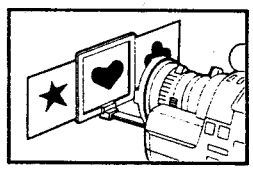
3

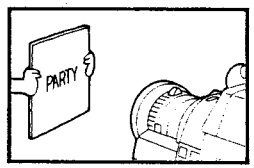




Use the TITLE PAGE button to select the page of memory in which you want your title to be stored. The page number will appear on the viewfinder screen.

4

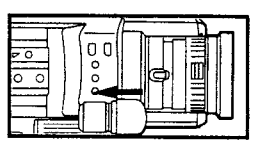




Aim the unit at your title in as well-lit a location as possible. You may also use the provided Title Easel for this purpose.

- If, at this point, the stripes or an old title appearing in the viewfinder prove bothersome, press the TITLE ON/OFF button to turn it off.
- When storing a title, the scene visible in the viewfinder may differ slightly from that which will be recorded on the tape.

5



Press the TITLE MEMORY button for about 1 second to store the title.

- When a title is stored poorly, check to see that the lighting is adequate and that the title is drawn with bold strokes, then shoot the title again.
- Every time the TITLE MEMORY button is pressed, the previously recorded title stored in that page of memory will be erased, and replaced with the new title.

Creating Titles

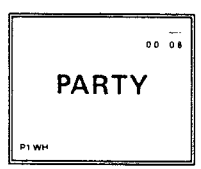
Make note of the following guidelines to assure best results.

1. Create titles using dark colours on light backgrounds – black writing on white paper, for example.
2. Letters should be drawn with broad strokes.

6 Press the COLOR button to select the colour in which you want your title to appear.

The colours will cycle in the following order:

BK (Black) → WH (White) → YL (Yellow) → CY (Cyan blue) → MG (Magenta) → GR (Green) → RD (Red) → BL (Blue) → BK



7 Press the IMAGE REVERSE button to choose negative or positive style.

To store additional titles, in digital memory pages 2-3, repeat steps 3-7 above.

- The TITLE MEMORY button works in both the Rec Pause and Rehearsal modes; care should be exercised not to press TITLE MEMORY accidently as this will erase stored titles.

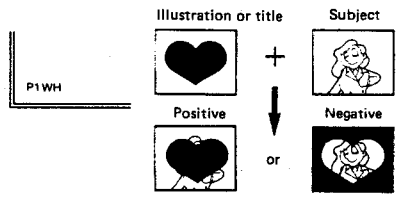
- *The page selection can be changed when the TITLE ON/OFF button is ON.*
- *When a page of memory contains nothing, it is "empty", and a pattern of stripes will appear in the viewfinder.*
- When the power is turned off or the unit is put into the Stop mode, the PAGE mode returns to the page 1 position.

Making a title at the beginning of a recording

1 Put the unit into the REC PAUSE mode.

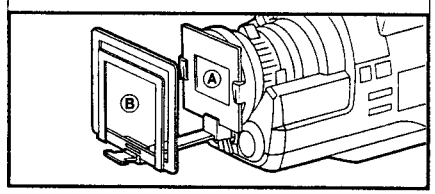
2 Press the TITLE ON/OFF button to display your title on the viewfinder screen.

3 Press the TITLE PAGE button until the title you wish to use is displayed. The pages will cycle from 1 to 3. Confirm the page, the colour, and the neg/pos style. Colour choice and neg/pos style can be changed at this point. Press the COLOR button to select a different colour, and the IMAGE REVERSE button to choose neg/pos style.



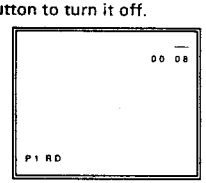
4 Press the unit's trigger to begin recording. The title will now be mixed with what you are recording.
Press the TITLE ON/OFF button when you wish to end the titled portion of your recording.

A photographic slide can be recorded by inserting it in Ⓐ and inserting a blank white card in Ⓑ of the provided title easel. Slides up to 1/8" thick can be used. Illuminate Ⓑ from behind for best results.



Inserting a title in the middle of a recording

1 Confirm the page, colour, and neg/pos style of your title.
Press the TITLE ON/OFF button to turn it off.



2 Shoot your live scene by pressing the VideoMovie's start/stop trigger.
Press the TITLE ON/OFF button when you wish to insert your title. It will be inserted into your ongoing recording at exactly that point.

3 Press the TITLE ON/OFF button again to stop inserting your title with the action you are recording.

Notes:

- Colour choice, page number, and IMAGE REVERSE selections can be changed when the title is displayed in the viewfinder.
- The "Colour" and "Page number" indications displayed in the viewfinder will not be recorded on the tape.
- When an "empty" page is called from memory, a pattern of stripes will appear in the viewfinder.
- When the lithium battery for the unit's clock is exhausted, stored titles may be lost. For best results, replace the lithium battery before its one year required replacement date. When the lithium battery warning appears in the viewfinder, as long as power is still supplied to the unit by the main battery pack, or from an AC source (even if the unit's power switch is off), the digital memory will be retained, however, the lithium battery should be replaced at this time.

PLAYBACK

ENGLISH

The GR-65E permits playback of recorded "VHS-C" video cassettes.
For connections refer to pages 22 and 23.

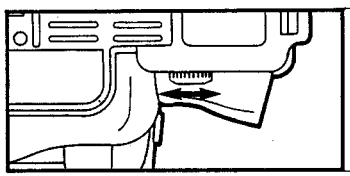
Preparations
- With a television equipped with audio/video input connectors, set the television's TV/VIDEO switch to VIDEO.
- With a regular television receiver, set the aerial select switch of the RF-V3E RF unit to VIDEO and the TV receiver's channel selector to your video channel (specified AV channel).

1 Supply power. (Battery or AC operation: see page 9.)

2 Press the POWER switch to ON.

3 Insert a pre-recorded cassette and press the PLAY button. Playback will start.

Ensure that tape is not slack inside the cassette, then load the cassette correctly. See page 3.



Tracking adjustment
If noise bars appear on the screen, adjust the TRACKING control. Turn it slowly in either direction to minimise noise bars. After playing a particular tape, return the TRACKING control to the centre position.

Shuttle Search

Fast-speed playback in the forward direction

Press the FF button in the Play mode. Playback will be speeded up to 3 times normal speed.

Fast-speed reverse playback

Press the REW button in the play mode. The tape will be played back in the reverse direction at 3 times normal speed.

Still playback

Press the PAUSE/STILL button during playback. The picture will stop on the screen.
- After about 5 minutes of still playback, the unit enters the Stop mode automatically, for tape protection, and switches itself off.

Notes:
- For brief scanning, keep the Shuttle Search button pressed for more than 2 seconds; when you release the button, the Search mode will be cancelled.
- Noise bars will appear and pictures may become monochrome while in these modes. This is not due to any defect of the unit.

Counter Memory Function

The GR-65E incorporates a counter memory mechanism which facilitates locating a specific tape segment.

1 Press the RESET button to reset the counter to "0".

2 Press the MEMORY button. The "M" mark will appear.

3 After recording or playback, press the STOP button, then the REW button. The tape will automatically stop at the counter reading of around "0".

4 Press the PLAY button to start playback.

Notes:
- The counter memory function is effective in the Fast Forward mode as well.
- To cancel the memory function, press the MEMORY button.
- When the power supply unit is disconnected, all indications on the LCD disappear and the counter memory function is instantly cancelled.

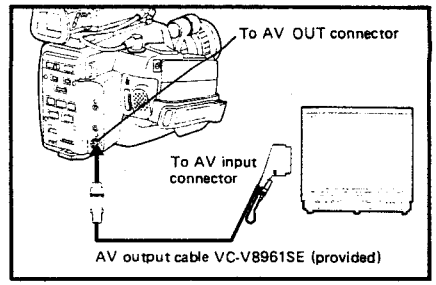
CONNECTION TO A TELEVISION FOR PLAYBACK

ENGLISH

① Connection to a television equipped with A/V input connectors

For this situation, use the provided AV output cable VC-V8961SE.

- Use the A/V output cable to simply connect the AV OUT connector of the GR-65E to the AV input connector (21-pin, SCART) of the TV.



② Connection to a television not equipped with A/V input connectors

For this situation, use the optional RF-V3E RF unit.

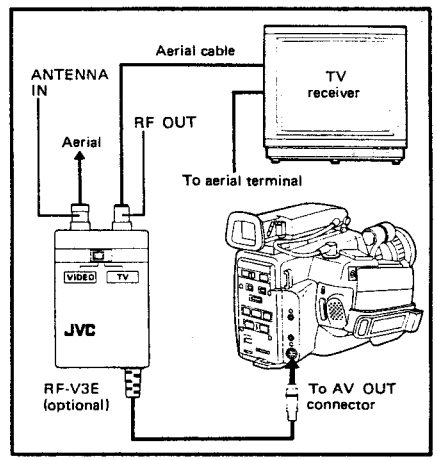
1 Remove the aerial cable from the TV receiver.

2 Connect the aerial cable to the ANTENNA IN terminal of the RF unit.

3 Connect the RF OUT terminal of the RF unit to the aerial terminal of the TV receiver using the provided aerial cable.

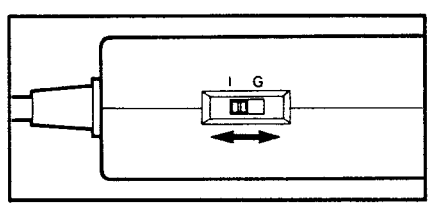
4 Connect the VIDEO/AUDIO INPUT cable of the RF unit to the AV OUT connector of the GR-65E.

5 Adjust the RF converter output channel according to your VIDEO CHANNEL. (See next page.)



PRECAUTIONS FOR RF-V3E (optional)
- For exclusive use with the VideoMovie.
- Do not disassemble or remodel the RF-V3E.
- Do not expose it to strong shocks.
- Unplug the connected equipment during lightning storms. (Never touch the aerial cable.)

- **TV system select switch (I/G)**
When you use a TV receiver built on the British PAL standard, shift the system select switch to "I".

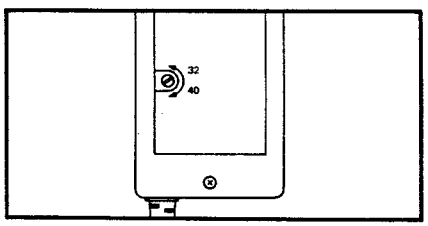


- **Viewing video cassettes being played back with the GR-65E**
To view video cassettes or to monitor the recording, set the VIDEO/TV switch of the RF unit to VIDEO and the TV channel selector to the channel corresponding to the RF output channel.
- **Viewing television programmes**
Set the VIDEO/TV switch to TV, and the TV receiver will function as usual.

ENGLISH

●RF converter channel adjustment screw

The RF unit permits playback of video and audio recordings through a TV receiver. The signals from the RF unit are viewed through a vacant channel not used for broadcasting in your area. The output frequency of the RF converter has been set to correspond to a broadcast on UHF channel 36. To view playback pictures from the GR-65E with your TV receiver, tune its specified AV channel to UHF channel 36. If channel 36 is employed for broadcasting in your area, readjust the RF converter output channel to one of the vacant channels between 32 and 40. To make this adjustment, remove the small cap on the back of the RF unit and turn the adjustment screw with a screwdriver to tune in a vacant channel.



●RF converter channel adjusting procedure

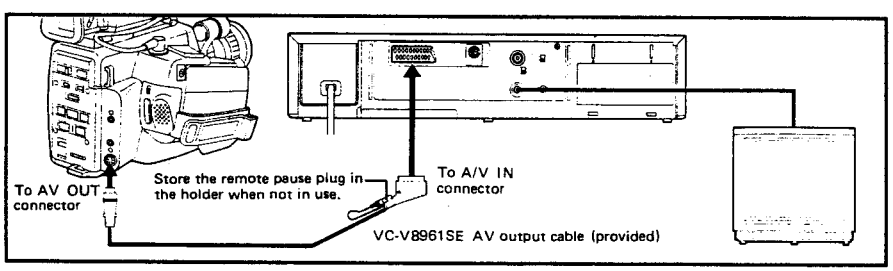
1. Set the AV channel of the TV receiver to one of the vacant channels.
2. Power the GR-65E.
3. Put the GR-65E in the Rehearsal mode (see page 14).
4. Set the VIDEO/TV switch of the RF unit to VIDEO.
5. While monitoring the output signal on the TV screen, turn the RF converter channel adjustment screw so that the monitored picture comes in most clearly.

CAUTION:
To view the GR-65E recordings with a TV receiver, use a TV receiver having a specified AV channel and employ this AV channel as your VIDEO CHANNEL, otherwise playback may be disturbed with vibrating or bending pictures. AV channels refer to channels exclusively for video playback; because AFC circuits are applied to these channels, the playback pictures can be stabilised. Recent TV receivers have one or more AV channels.

TAPE DUBBING OR EDITING

Connection

1. Set the DUBBING ON/OFF switch to ON.
2. Connect the AV OUT connector of the GR-65E to the A/V IN connector of the video recorder using the provided AV output cable VC-V8961SE.
3. Connect a television to the video recorder to monitor the picture while dubbing.


To AV OUT connector
Store the remote pause plug in the holder when not in use.
To A/V IN connector
VC-V8961SE AV output cable (provided)

Operation

●Put the GR-65E in the Play mode and the connected recorder in the Record mode to copy the recording. To edit out unwanted material, press the recorder's PAUSE/STILL button.

MASTER EDIT CONTROL SYSTEM

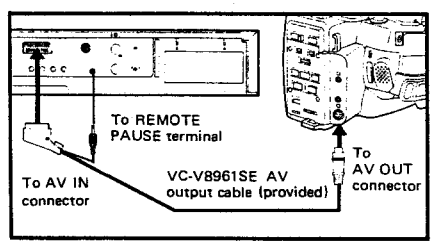
There are some VCRs which are not compatible with Master Edit Control. For these units, use the VCR's pause control to perform edit-in or edit-out functions.

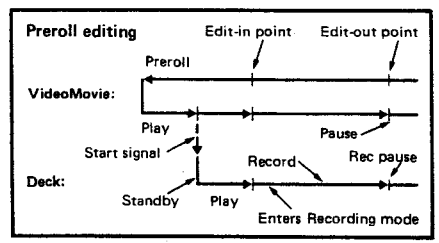
ENGLISH

This function is available when using **designated** JVC video decks equipped with a remote pause terminal. The Master Edit Control system allows control of the connected deck using the VideoMovie's controls, preroll editing for edits free of transition-point gaps and distortion.

Connection

1. Set the DUBBING ON/OFF switch to ON.
2. Connect the AV OUT connector of the GR-65E to the A/V IN connector and remote pause terminal of the video recorder.
3. Connect a television to the video recorder to monitor the picture while dubbing.





Operation

Dubbing can be initiated from Stop mode or Still mode.

●For dubbing a tape

1. Switch on the VideoMovie's power.
2. Switch on the deck's power.
3. Put the deck in the Record-Pause mode.
4. Press the QUICK REVIEW/EDIT button to start editing. The tape is loaded, then dubbing starts.
5. Tape stops when the PAUSE/STILL or STOP button of the GR-65E is pressed or counter reaches "M, 0".
6. Deck stops recording and enters the Record-Pause mode.

●For editing

1. Switch on the VideoMovie's power.
2. Turn on the deck's power.
3. Put the deck in the Record-pause mode.
4. Locate the edit-in point via play, fast-forward, rewind, or Shuttle Search, and press the PAUSE/STILL button.
5. Press the QUICK REVIEW/EDIT button to start editing.
6. Tape stops when the PAUSE/STILL or STOP button of the GR-65E is pressed or counter reaches "M, 0".
7. Deck stops recording and enters the Record-Pause mode.

Note:
When the QUICK REVIEW/EDIT button is pressed from the Still mode, the tape is rewound for 5 seconds of programme time. The Pause/Still indicator blinks on the LCD to indicate rewinding is taking place. After prerolling, first the prerolled section is played back for stabilizing tape run. During playback of the GR-65E, it gives a start signal to the deck standing by in the Record-Pause mode to start playback and then to enter the Recording mode at the edit-in point, while the GR-65E continues playback. The Master Edit Control indicator appears on the LCD during dubbing.

Setting the edit-out point using counter memory

In the above procedures, counter memory can be used to set the edit-out point before editing takes place, so that the VideoMovie automatically stops playback at the designated point. If the edit-out point is to be set in this way, do so following step 3 of the dubbing operation.

1. Locate the desired edit-out point on the VideoMovie's tape.
2. Press the VideoMovie's PAUSE/STILL button.
3. Reset the VideoMovie's counter to "0".
4. Press the VideoMovie's counter MEMORY button.
5. The VideoMovie enters the Pause mode, and the deck enters the Record-Pause mode.

Note:
When the tape reaches the preset edit-out point during the dubbing operation, it may stop slightly before or after the designated point on the tape.

INSERT EDITING

ENGLISH

Insert editing means recording a new scene into a section of prerecorded tape so that a part of the original recording can be replaced with a new sequence without excessive picture distortion at the edit-in and edit-out points. In the Insert Edit mode, the original audio on the normal audio track remains unchanged.

1 Locate the desired edit-out point on the VideoMovie's tape and press PAUSE/STILL.

2 Press RESET to obtain a "0" reading, then press MEMORY to obtain an "M" indication on the LCD.

3 Press REW/SHUTTLE SEARCH to rewind the tape a little beyond the beginning of the scene your wish to insert.

4 Press PAUSE/STILL exactly at the beginning of the scene you wish to insert.

5 While holding INSERT/MONITOR pressed, press PAUSE/STILL. The INSERT indicator lights and the VideoMovie enters the Insert Edit mode with the scene at which the VideoMovie is aimed appearing on the screen for monitoring.

6 Press Recording start/stop to insert the new sequence.

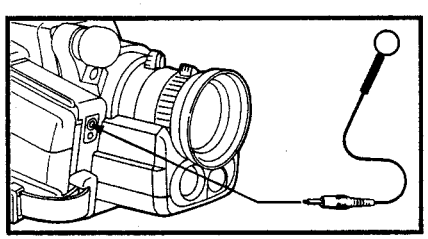
7 When the counter reading of "0" is reached, insert editing stops automatically and the VideoMovie enters the Playback mode.

Notes:

- When the tape reaches the preset edit-out point during the editing operation, it may stop slightly before or after the designated point on the tape.
- Only video signals are recorded in the Insert Editing mode. When the sound is to be recorded, press the AUDIO DUB and PAUSE/STILL buttons simultaneously in the Insert Pause mode. When INSERT/MONITOR and PAUSE/STILL buttons are pressed simultaneously again, the unit reenters the video-signal-only recording mode.

AUDIO DUBBING

Audio dubbing means recording a new soundtrack on a pre-recorded tape, i.e., replacing the original sound with new audio material.



Precautions

- Tapes with their safety tabs removed cannot be audio dubbed. Reseal the safety tab slot to perform the dubbing.
- If whistling or howling is heard during audio dubbing, reduce the TV volume or move the mike farther away from the TV.
- When dubbing from a microphone
  Connect the microphone to the VideoMovie as shown on the left.

1 Locate the desired edit-out point on the VideoMovie's tape and press PAUSE/STILL.

2 Press RESET to obtain a "0" reading, then press MEMORY to obtain an "M" indication on the LCD.

3 Press REW/SHUTTLE SEARCH to locate more quickly the place on the tape you want audio dubbing to begin.

4 Press PAUSE/STILL at the exact beginning point for audio dubbing.

5 While pressing AUDIO DUB, press PAUSE/STILL to enter the Audio Dub Standby mode.

6 When you are ready with the new audio material, press PLAY to begin audio dubbing.

7 When the counter reading of "0" is reached, audio dubbing stops automatically and the VideoMovie enters the playback mode.

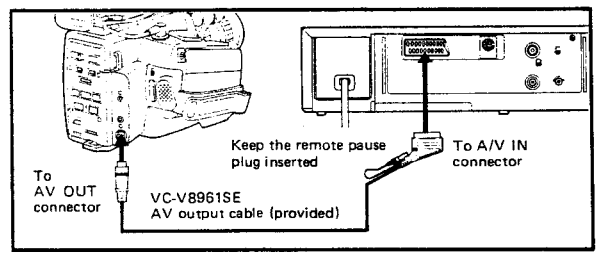
USING WITH ANOTHER RECORDER

ENGLISH

For continuous documentation of longer events, the GR-65E can be used as an independent video camera in combination with either a deck-type or portable video recorder.

Using a recorder not equipped with a remote pause terminal

- Connect the AV OUT connector of the GR-65E to the A/V IN connector of the video recorder using the provided AV output cable VC-V8961SE.



Operation

1. Press the INSERT/MONITOR button. The camera output signal is now available via the AV output cable.
2. Put the connected recorder in the Record mode. Recording will start. Tape start/stop should be controlled with the recorder's buttons.

Note:

- In this configuration, it is possible to obtain a continuous recording and an edited-out recording of the same event simultaneously, because the GR-65E's start/stop button only controls the tape inside itself while another tape loaded in the connected recorder continues running. To record on the GR-65E's tape, follow the same recording procedure as described before: press REC Standby and then the start/stop button.

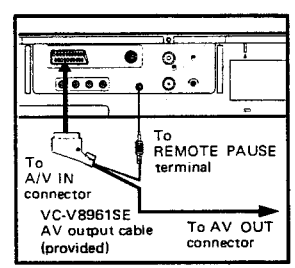
Using a recorder equipped with a remote pause terminal or with a 10-pin camera connector

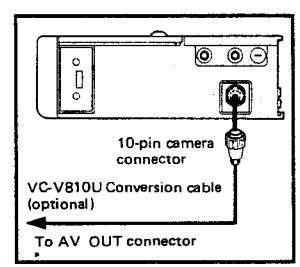
For a recorder with a remote pause terminal

- Connect the AV OUT connector of the GR-65E to the A/V IN connector and remote pause terminal of the video recorder using the provided AV output cable VC-V8961SE.

For a recorder with a 10-pin camera connector

- Connect the AV OUT connector of the GR-65E to the 10-pin camera connector of the second recorder using the optional VC-V810U conversion cable.





Operation

1. Press the INSERT/MONITOR button.
2. Set the connected recorder in the Recording Standby (Record-Pause) mode.
3. Press the start/stop button of the GR-65E to start recording.

Note:

- To record on the GR-65E's tape as well, press the REC standby button and then the start/stop button.

Precautions

- Power is not supplied to the GR-65E from the connected VCR. Independent power supply is required for both the GR-65E and the VCR.
- If you stop recording by pressing the GR-65E's start/stop button, the connected VCR also stops in the Pause mode. However, the pause command signal is not delivered to the connected VCR in the following cases and, therefore, the VCR will start automatically:
  (1) when the GR-65E is switched off or its battery becomes discharged.
  (2) when the VC-V810U cable is disconnected.

Therefore, before replacing the battery or tape for the GR-65E put the connected VCR either in the STOP or REC LOCK mode.

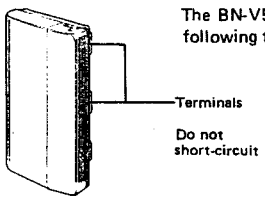
CHARGING THE BATTERY PACK

ENGLISH

To charge the battery pack, use the exclusive AC power adapter/battery charger AA-V6EG (provided/optional) or car battery charger BH-V5E (optional).

Note:
The AA-V6EG AC power adapter/battery charger will accept 110 V to 240 V power supplies. Selection is automatic and no adjustment is required.

A WORD ON THE EXCLUSIVE BN-V5GU/V6GU/V7GU BATTERY PACKS



The BN-V5GU/V6GU/V7GU are nickel-cadmium batteries. Give attention to the following to make the most of their characteristics.

Temperature ranges-
The recharging time is based on room temperature of 20°C.
The lower the temperature, the longer the recharging time.

For charging: 10°C to 35°C
For operating: 0°C to 40°C
For storing: -10°C to 30°C

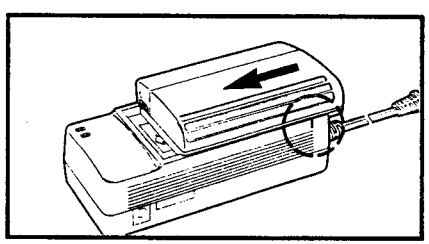
The battery pack has been kept in the uncharged state for shipment. Therefore, before use, charge it.
BE SURE TO CAREFULLY READ THE CAUTION ATTACHED TO THE BATTERY PACK.

Charging procedure

Charging time

BN-V5GU 50 min.	BN-V6GU 70 min.
BN-V7GU 80 min.	

- The charging time differs depending on the ambient temperature and the condition of the battery pack.



1 Connect the AC power cord to a wall outlet (The POWER indicator will light.)

2 Align the marks on the battery pack and adapter.

3 *Slide the battery pack in the direction of the* arrow until it locks in place.

4 *When charging is completed, the CHARGE indi-*cator that is red turns green.

PRECAUTIONS
- If used near a radio, the provided AA-V6EG AC power adapter/battery charger may interfere with reception.
- Prevent inflammables, water and metallic objects from entering the unit.
- Do not disassemble or modify the unit.
- Do not apply shocks to the unit.
- Do not subject the unit to direct sunlight.
- Avoid using the unit in extremely hot or humid places.
- Avoid using the unit in places subject to vibrations.

Note:
The optional BH-V5E Car Battery Charger can charge the batteries from a car battery. For details refer to the instructions of the BH-V5E.

Recording time for the GR-65E

BN-V5GU 25 min.	BN-V6GU 60 min.
BN-V7GU 80 min.	

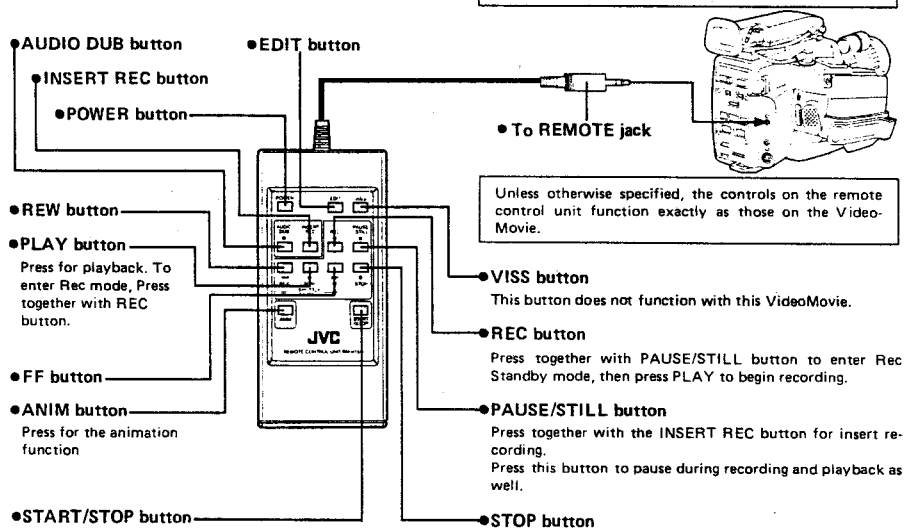
- The recording time per charge is influenced by the duration of recording standby, frequency of zooming, etc. It is safer to have spare battery packs.

USING THE REMOTE CONTROL UNIT (optional)

ENGLISH

The remote control unit RM-V15U (optional) permits VCR functions to be controlled from a distance.

- Plug the remote control cable of the remote control unit into the remote connector on the VideoMovie.


●AUDIO DUB button
●EDIT button
●INSERT REC button
●POWER button
●To REMOTE jack
●REW button
●PLAY button
Press for playback. To enter Rec mode, Press together with REC button.
●FF button
●ANIM button
Press for the animation function
●START/STOP button
●VISS button
This button does not function with this VideoMovie.
●REC button
Press together with PAUSE/STILL button to enter Rec Standby mode, then press PLAY to begin recording.
●PAUSE/STILL button
Press together with the INSERT REC button for insert recording.
Press this button to pause during recording and playback as well.
●STOP button
JVC

Unless otherwise specified, the controls on the remote control unit function exactly as those on the VideoMovie.

Note:
The Rehearsal mode cannot be engaged using this unit.

Animation function

Animation produces the illusion of movement in otherwise stationary scenes or objects. This technique is accomplished by shooting a series of slightly different pictures of the same scene or slightly different poses of the same object for a brief period of about 1/2 second.

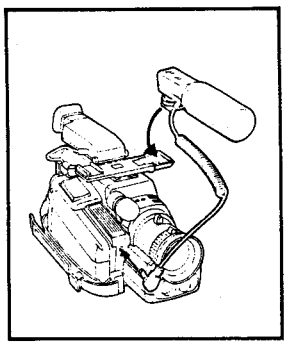
Operation
1. With the VideoMovie in the Record-Pause mode.
2. Press the ANIM button of the remote control unit RM-V15U.
   - Recording mode indicator and Pause mode indicator blinks alternately on the VideoMovie's LCD.
3. Press the Recording Start/Stop button or Play button after focusing the camera on a subject.
4. Recording stops automatically in the Record-Pause mode after about 1/2 second.
5. Repeat step 3 for the required number of shots.
6. Playback the recorded series to check if results were satisfactory.

Notes:
- The Animation mode can only be engaged from the Record-Pause mode.
- Before recording in the Animation mode at the very beginning of a tape, set the VideoMovie to the Record mode for about 5 seconds, in order that the tape runs smoothly. Using the Fade-in function at this point is a good way to begin an animated programme.
- During an Animation sequence, fading cannot be engaged.
- Release the Animation mode by pressing the ANIM button or the STOP button.
- If recorded background sound is undesirable, use the Audio Dubbing function to erase or replace it.
- When playing back an animated recording, the colour may be unstable with same TVs.

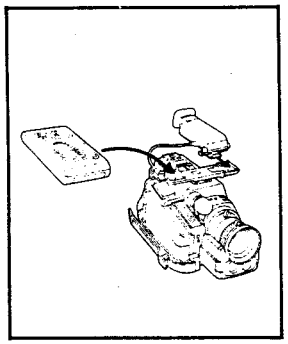
SHOE ADAPTER (optional)/ CARRYING HANDLE (optional)

ENGLISH

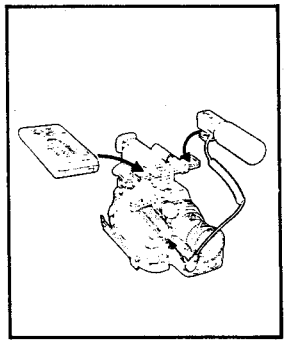
Attaching external microphone using shoe adapter.



Attaching character generator using shoe adapter.



Attaching character generator and external microphone using shoe adapter and carrying handle.



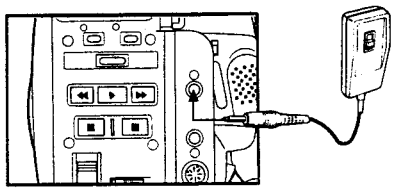
CAUTION
- Do not attach a video light, its heat could cause malfunctioning of the GR-65E.

Notes:
- Do not adjust the viewfinder angle while using shoe adapter.
- Keep carrying handle in up position while attaching accessories.
- Run the microphone cord behind the shoe adapter.

REMOTE CONTROL UNIT RM-P1U (optional)

The remote control unit RM-P1U (optional) permits recording start/stop to be controlled from a distance.

1



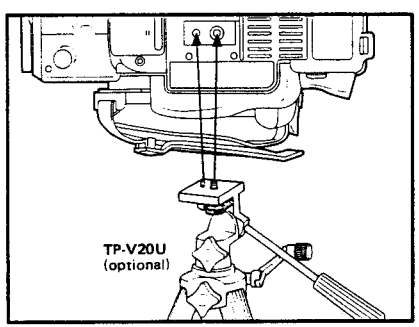
Plug the remote control cable into the REMOTE connector.

2 Press the standby button to engage the Recording Standby mode.

3 To start recording, set the remote control's switch to REC; to stop temporarily, set it to PAUSE.

Note:
Fader will not function when remote control unit is connected.

TRIPOD MOUNTING



Align the screw and camera direction stud of the tripod with the camera's tripod mounting socket and stud hole, and firmly tighten the screw.

SUPPLEMENTAL INFORMATION

ENGLISH

What is "colour temperature"?
Light is composed of various colour components in different proportions. A relationship exists between the temperature of a light source and the colour components of the emitted light; as the temperature rises, the colour of the light varies from red, orange, yellow, white to blue in that order. "Colour temperature" is a value that expresses differences in colour among light sources, measured in Kelvin degrees. Bluish light has a higher colour temperature than reddish light.

What is "white balance"?
Making the colours look natural on TV is what white balance is all about. Because a camera is not as adaptable as the human eye, if a light source is reddish, white subjects in that light are recorded as reddish. White balance adjustment is performed to compensate for colour temperature variations of light so that whites are reproduced as white. Correct white balance makes all other colours correct. The GR-65E can perform automatic white balance adjustment in the full-auto mode. However, if illumination is insufficient, white balance adjustment cannot be performed. To obtain correct colours, therefore, sufficient illumination is essential.

What is "illuminance"?
"Illuminance" (also called "luminance") is the intensity or brightness of light, expressed in lux. The GR-65E is designed to provide best pictures under the conditions of a 700-lux illuminance, although shooting is possible all the way down to 10 lux. To obtain good pictures in very bright light, the use of an ND (neutral density) filter is recommended. (See chart on this page.)

How to get good colour pictures
The simplest way is to provide sufficient lighting (close to the camera's reference illuminance) and accurately adjust the camera to the colour temperature of that lighting. If light sources of different colour temperatures are used together, accurate white balance adjustment is very difficult. For example, if natural light is mixed with artificial light, which is likely to occur next to windows, correct colours of the subject are difficult to obtain. It is recommended in such cases that curtains in the room be closed to shut out light from outside. Also, when artificial lighting devices are used, they should all have the same colour temperature. For example, it is recommended that incandescent or halogen lamps not be used together with fluorescent lighting.

Colour temperatures of various artificial lighting

Type of illumination		Colour temperature
Tungsten lamp for home use		2800 K
Tungsten lamp for photographic use		3200 K
Quartz-halogen lamp		
Blue lamp for photographic use		5000 K
Fluorescent lamp	Warm white	3500 K
	White	4500 K
	Daylight type	6500 K

Illuminance chart

- The values on this chart are approximated to give you a rough reference.

	Unit: Lux	
ND filter desired	100,000	• Clear sky, mid-day, under sunlight (100,000)
		• Clear sky (10:00 a.m.) under sunlight (65,000)
		• Clear sky (3:00 p.m.) under sunlight (35,000)
		• Cloudy sky (mid-day) under sunlight (32,000)
Range for practical use		• Cloudy sky (10:00 a.m.) under sunlight (25,000
	10,000	
		• By the window during the afternoon (3,500)
	2,000	• Cloudy sky (one hour after sunrise) (2,000)
	1,000	• Clear sky (one hour before sunset) (1,000)
	600	• Counters at department stores (500 – 700)
	500	• Bowling centre (500)
		• Office under fluorescent light (400 – 500)
		• Library (400 – 500)
		• Direct light of a flashlight at 1 m distance (250)
Lighting desired	100	• Streetlight at night (150 – 200)
	80	
	Minimum lighting for an object	
	15	• Cigarette lighter (at a distance of 30 cm) (15)
	10	• Candlelight (at a distance of 20 cm) (10 – 15)

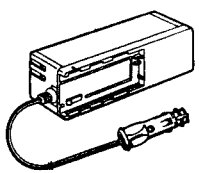
SYSTEMS FLEXIBILITY

ENGLISH

For maximum enjoyment, make the most of the provided or optional accessories depending on the situation.

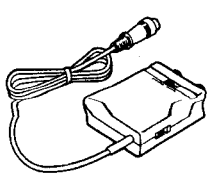
- **Regualr battery pack BN-V5GU**
  Pages 9 and 27
- **High-capacity battery pack BN-V6GU**
  Pages 9 and 27
- **Super High-capacity battery pack BN-V7GU**
  Pages 9 and 27

•Car battery charger BH-V5E
Pages 9 and 27
Use to charge the battery pack, or power the GR-65E using a car battery.

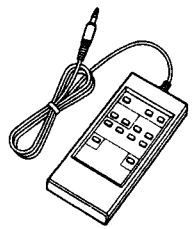


•AC power adapter/battery charger AA-V6EG
Pages 9 and 27
Use to power the GR-65E with household AC current or charge the battery pack.

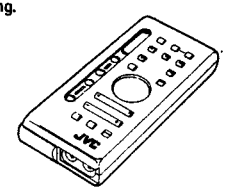
•RF unit RF-V3E
Pages 22 and 23
Use to connect the GR-65E to a regular TV receiver for playback.



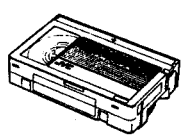
•Remote control unit RM-V15U
Page 28
Controls VideoMovie's VCR functions from a distance.



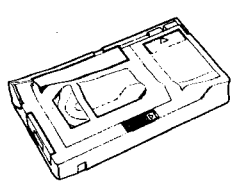
•Character generator CG-P50E
Page 29
Allows superimposition of titles, dates and lap time during recording.



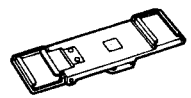
•Compact video cassette EC-30
Page 3
Allows 30 minutes of recording and playback.



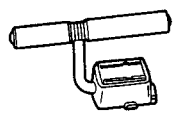
•Cassette adapter C-P6U
Page 32
Enables the EC-30 compact video cassette to be used with regular VHS machines.



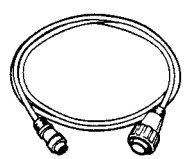
•Shoe adapter CU-V410U
Page 29
Use to attach microphone, character generator, etc.



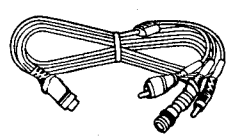
•Carrying handle VU-V130U
Page 29
Use to carry GR-65E.



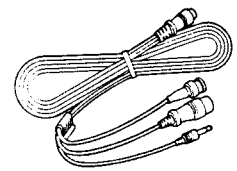
•Conversion cable VC-V810U
Page 26
For connecting the GR-65E to a VCR with a 10-pin camera connector.



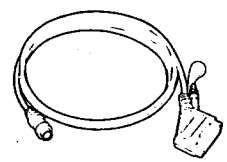
•AV output cable VC-826E
Use to connect GR-65E to television set equipped with audio/video input connectors for playback, or to a second video recorder for dubbing.



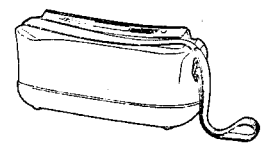
•AV output cable VC-V856E



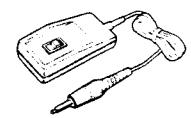
•AV output cable VC-V8961SE
Pages 22, 23, 24 and 26
Use to connect the VideoMovie to a TV or VCR equipped with a 21-pin connector for monitoring or dubbing/editing.



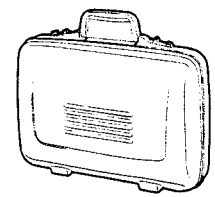
•Carrying bag CB-V25U
Use to carry the GR-65E together with basic accessories.



•Remote control unit RM-P1U
Page 29
Controls recording start/stop from a distance.



•Carrying case CB-V35U
Use to carry the GR-65E together with accessories.

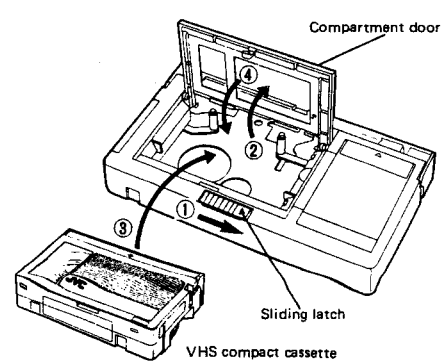


ENGLISH

USING THE CASSETTE ADAPTER (provided)

The VHS compact video cassettes recorded with the GR-65E can be played back with a standard VHS machine by using the provided C-P6U Cassette Adapter.
(A compact video cassette installed in the cassette adapter is fully compatible with a standard VHS machine for both recording and playback.)

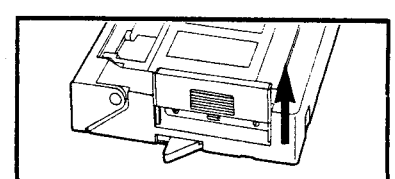
•C-P6U Cassette Adapter
Being battery-operated, the C-P6U performs tape loading and unloading automatically.



Note:
- During special-effects playback (slow motion, still frame, etc.) the picture may vibrate or noise bars may appear on the screen.

• Inserting the battery into the cassette adapter

Remove the battery cover by sliding it up.
Install one "R6" battery and reattach the cover.



IN CASE OF DIFFICULTY

ENGLISH

What may initially appear to be trouble is not always a real problem. Make sure first . . . .

Symptoms	Check points
Power	
No power is supplied.	●Is the battery pack correctly installed? ●Is the battery pack charged? ●Is the power supply unit correctly connected? ●Is the POWER switch of the connected AC adapter set to ON?
Recording	
Recording is impossible.	●Check to see if the cassette safety tab is in place. See page 3.
Picture colours greatly differ from actual subject colours	●If in the manual white balance mode, check the setting of the ☀/▭/☀ button.
No sound is recorded with an external microphone.	●Is the microphone's switch set to ON?
Recording does not start.	●Have you pressed the REC standby button first?
Playback	
Tape is running, but no playback picture appears.	●Is the VIDEO/TV switch of the RF unit set to VIDEO? ●Is the TV receiver set to your video channel?
Noise bars appear in the playback picture.	●Use the TRACKING control to reduce noise bars.
Tape transport	
Tape stops during fast forward or rewind.	●Is the "M" indication visible in on the LCD? If so, press the MEMORY button to cancel the memory function.
Rewinding or fast forwarding is impossible.	●Check to see if the tape has already been fully wound on one reel or the other.
Other	
No function is available with more than two mode indicators lit.	●If this should happen when using power supply units other than the battery pack, turn their POWER switch on and off. With a battery pack, replace it with another charged one.
Vertical white lines appear when shooting a very bright object.	●This may occur when the background contrasts very much with the object. This is normal.

The GR-65E is a microcomputer-controlled device. External noise and interference might prevent it from functioning properly. In such cases, first disconnect its power supply unit (battery pack, AC power adapter, etc.); and then reconnect it and proceed as usual from the beginning.

SPECIFICATIONS

ENGLISH

Format	: VHS standard
Power source	: DC 9.6 V ⎓
Power consumption	: 8.0 W
Signal system	: PAL
Recording system	: Luminance: FM recording Colour: Converted sub-carrier direct recording Conforms to VHS standard
Cassette	: VHS-C cassette
Tape speed	: 23.39 mm/sec
Recording time Max.	: 30 minutes (with EC-30 cassette)
VIDEO	
Output	: 1 Vp-p, 75 ohms, unbalanced (via AV OUT connector)
S/N ratio	: More than 42 dB (with Rohde & Schwarz noise meter)
AUDIO	
Output	: -6 dBs, 1 k-ohm (via AV OUT connector)
Microphone input	: -68 dBs, high impedance, unbalanced
Pickup	: 1/2"-format CCD
Minimum required illumination	: 10 lux (at F/1.4)
Illumination range	: 10 – 100,000 lux
Lens	: F/1.4, f = 8.5 – 68 mm, 8:1 power zoom lens with auto iris control and macro position, filter diameter 52 mm
Viewfinder	: Electronic viewfinder with 0.6" black/white CRT
Selectable high-speed shutter	: 1/250, 1/500, 1/1000 second
Colour temperature switching	: Switchable (3,200 K/4,500 K/5,500 K)
White balance adjustment	: Full-auto/preset standard
Operating temperature	: 0°C to +40°C
Operating humidity	: 35 % to 80 %
Storage temperature	: -20°C to +50°C
Weight	: 1.2 kg (with viewfinder)
Dimensions	: 111(W) x 150(H) x 253(D) mm (incl. viewfinder)

AA-V6EG SPECIFICATIONS

Power requirement	: AC 110 – 240 V∿, 50/60 Hz
Power consumption	: 23 watts
Output	: DC 14 V ⎓ 1.1 A (Charge) DC 9.6 V ⎓ 1.2 A (VideoMovie)
Charging system	: Constant current, peak detection, timer controlled
Dimensions	: 150(W) x 42(H) x 69(D) mm
Weight	: Approx. 380 g

C-P6U SPECIFICATIONS

Type	: VHS cassette adapter
Dimensions	: 188(W) x 25(H) x 104(D) mm
Weight	: 240 g
Accessory	: "R6"-size battery x 1

Provided accessories:

AC power adapter/battery charger AA-V6EG
Cassette adapter C-P6U
Cassette tape EC-30
Battery pack BN-V6GU
AV output cable VC-V8961SE
Shoulder strap
Battery for clock operation CR2025
Title easel
For optional accessories, refer to pages 31 and 32.

Design and specifications subject to change without notice.